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ORIGINAL ARTICLES.

ON THE RAPID METHOD OF TREATING EXTERNAL ANEURISM.*

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The treatment of aneurism by pressure or by compression, is not of recent date, and although medical historians are not exactly agreed as to the precise time when this method was inaugurated, it is said that Jean de Vigo, a physician of Geneva, in the sixteenth century, conceived the idea, and that Tulpius, a professor of Amsterdam, in 1641, recorded a successful case treated in this manner, the aneurism being situated between the thumb and forefinger.

The first *instrument* devised for the pressure-treatment was that of the Abbé Bourdêlot, and was called a *ponton*; it consisted of a pad of peculiar shape, with a channel or groove on its under surface which was supposed to allow a portion of the blood to pass beneath it, and from which circumstance, the term "*ponton*," or bridge, was applied to it. In those days the majority of external aneurisms were situated at the bend of the elbow in the course of the brachial artery, occasioned by accidentally wounding the vessel in venesection. This indeed was the cause of the tumor in the case of Bourdêlot; and it was for his own case that the instrument was invented, and which he wore continuously for a year before the cure was effected.

After that period many compressors were invented and modified by Vallant, Senffio, Armaud, Heister, Fourbert, Petit, Dupuytren, Scarpa, Tenooni and others, and to this day, those interested in the subject can find records of tourniquets, pads, weights and rings adapted for the compression of external aneurism.

The varied points at which pressure has been applied are also a matter of interest. Bellingham tells us that by some it was directed immediately upon the aneurismal sac; by others, the sac and the entire limb were at the same time compressed, which is a somewhat similar method to that about to be more fully considered. Then again, the point believed to be the best was upon the artery between the aneurism and the heart, which was modified again by additional pressure on the sac. After these had been employed with more or less success for a considerable time, the idea of exerting compression on the distal side of the tumor (probably arising from the success of Bradsor's and Wardrop's ligature) was carried out and was effective in the hands of several surgeons, while others declared that the sac should be laid open (after the method of Antyllus) and pressure made upon the ruptured vessel. A combination of dissection and pressure has been also recommended, the main vessel being exposed by dissection and upon it the weight directly applied. It is unnecessary in this paper to enter further into the history of the treatment of aneurism by compression, which could be extended almost indefinitely from the voluminous articles upon the subject which occupy very conspicuous places in surgical literature.

The chief idea of this essay is to lay before the society the newest mode of treatment, known as the "Rapid Method," and which only can be effected by the India rubber bandage introduced by Esmarch.

At first sight the treatment appears simple, and so it is; but as one more carefully considers it, several pathological conditions have to be considered which materially enhance the interest in the procedure.

We are all familiar with the ordinary appearances presented by an old aneurism, the laminated, fibrinous clot of Broca lining the walls of the sac, and the passive or currant-jelly clot in the centre, through which the blood-stream passes with more or less rapidity. This external clot is beautifully shown in the specimen I herewith present to the society. It is rarely that such an aneurism is cured, but I think I may safely say that this one was. The patient came from Yang-Tse-Kiang River, suffering from the well known symptoms of "aneurism of the arch." There was absence of the radial pulse, an enlargement of the upper portion of the chest a little to the left of the sternum, *bruit*, restlessness, neuralgia, cough and hoarseness.

I put him for two weeks on Tufnell's rest and starvation treatment, and gave him 90 to 120 grains of *gallic acid* daily, together with five drops of the *subsulphate of iron* on alternate days. This treatment was continued with the greatest regularity for nearly four months and was under the special supervision of Dr. Dillow. The *bruit* finally disappeared, the heart beats became more normal, the patient improved in health and in weight, and went out of the hospital able to perform hard daily labor, from which he had been entirely incapacitated for over four years. He lived several years after, and finally died of lobular pneumonia, contracted by exposure on board ship on a freezing night in January.

The specimen is merely introduced to show a unique case in which Broca's clot is remarkably well preserved.

It appears to me, however, that it is erroneous to denominate either such a collection of laminated fibrin as lines the cavities of all aneurisms, or the soft, friable, semi-consistent mass of red blood corpuscles and serum found in the interior of the sac, as "clots," for in reality neither of them is so. It is upon the thorough understanding of this question that the whole *rationale* of the treatment by the rapid method rests.

If blood be drawn from the body and allowed to remain at *perfect* rest, a *true* blood clot is formed, consisting of fibrin, white and red corpuscles and serum; if, however, this blood be defibrinated by whipping, as we do previous to transfusion, for instance, the fibrin adheres in strings and shreds to the intrument used, the corpuscles and serum remaining in a semi-liquid state. This is merely a physical effect, and is true without the body as well as within it, as shown in the character of the clot which is found above the ligature after an artery

*Read before the N. Y. Medico-Chirurgical Society, April 10, 1883.

has been tied, and also by the bits of fibrin that tip the valves of the heart in certain organic forms of cardiac disease. Therefore, in the one case we have a true blood clot, which can become either organized (as we see in the occluded artery, the leucocytes rapidly adhering to the coats of the vessels, and proceeding without delay to the formation of tissue) or disintegrated or destroyed, as we may observe in certain cases of venous thrombi, while in the other case we have merely laminated fibrin that remains laminated fibrin forever, no matter how old the case may be, or a soft clot without the power of even forming a single lamina. From these deductions the rule has been laid down, that "laminated fibrin is only separated from blood in motion; when once formed it is very stable, not prone to disintegration or to organization. A true blood clot is only formed when the blood is at absolute rest; and when formed the clot is unstable, readily being organized, disintegrated, absorbed or converted into a dry, friable material,"—which formula will explain both the *rationale* of cure and of failure by the so-called rapid method.

Let us now examine what this method is and how it is employed.

The object, as has already been explained, is to form a *true* blood clot, which can only be accomplished by keeping the blood quiet in the sac. To this end, therefore, the patient being recumbent, beginning at the distal extremity of the limb (let us say at the toes for a popliteal aneurism), the "Esmarch" is wound tightly around the limb until the aneurism is reached, over which a few light turns are made, merely as a means of support to the walls of the tumor, and so soon as the aneurism is passed, the India rubber must again be tightly applied up to the centre of the thigh, and there made fast, either by a few extra turns or by the elastic tubing. Some surgeons prefer to leave the aneurism entirely uncovered, applying the elastic above and below it; others (as I understand from a case lately treated by Dr. R. E. Weir, in the New York Hospital) put on the "Esmarch" up to the site of the aneurism, while the patient is recumbent, then he is placed erect and the adjustment of the elastic above the tumor completed. This is done, first, to fill the sac, and second, to shut off all communication with it, both above and below. Others have applied the tubing above at the cardiac side of the tumor. It may be interesting in this place to state that Dr. Walter Reid, of the English Navy, is the author of the method of treatment we are now considering, and that he was led to the idea by perceiving how well the elastic tourniquet was borne for over an hour in a case of necrosis of the femur upon which he was operating. Having at that time a case of popliteal aneurism under his care, on September 11, 1875, at 10:20 o'clock A.M., he applied the elastic roller, as I have already mentioned, and removed it in fifty minutes, on account of the severe pain it occasioned. There was still some pulsation in the tumor, and a Cait's compressor was lightly applied till the next evening, when the patient was cured. This case is recorded in full in *The Lancet*, 1875, Vol. III., p. 448.

This treatment is certainly a variety of the compression method, which has already been alluded to in the commencement of this paper, but differs very materially from that produced either by the ordinary tourniquet, by digital compression, or by the ligature.

So soon as the circulation is arrested, either by digital compression or by a pad, or by a ligature to the artery on the cardiac side of the tumor, at once, without delay, the blood vessels begin in the vicinity of the obstructed vessel to expand, and in a short period the collateral circulation is established, and a few drops of blood force themselves into the aneurismal sac and a small stream finally trickles through the centre of the tumor, thus disturbing the stability of the clot, interfering with its proper organization, and necessarily protracting the time occupied for the cure from several days to several weeks. In a case of popliteal aneurism which came under my care, I was obliged to continue digital compression at Scarpa's space for seventy-five hours, night and day, without interruption, and after an interval of some hours, to re-apply it, before the cure was effected; and this was considered a short period when compared with the time occupied in the treatment of other cases.

The Esmarch's bandage, as now employed, acts in a very different manner; the entire circulation is arrested above and below the aneurismal tumor and the formation of a true clot thus materially favored. This clot then becoming firm, there is an additional plug formed in the artery itself, which, if the blood be in a good condition, proceeds rapidly to organization and the aneurism is cured, or becomes disintegrated, and the effort is a failure.

Dr. A. Pearce Gould, from whose work I have gained much information regarding this method of treatment, has tabulated seventy-two cases treated by this method, of which there were thirty-five cured. In two the result was doubtful; five died, and in thirty the aneurisms were not cured; showing a success of about fifty per cent. Of those cured, one was of the anterior tibial, one iliac, five femoral, and twenty-eight popliteal. Of the failures, there were twenty-four cases of popliteal, three of the femoral, two brachial, one axillary and one of the internal circumflex. Some of these cases were subjected to a preparatory treatment by medicine and rest, and some were not. Of the twenty-eight cases of popliteal aneurism, the bandage was applied once in eighteen cases, twice in five cases, and more than twice in four cases, and in one case the record is not clear.

In twenty-nine successful cases the length of time the bandage was allowed to remain on the limb is also given. In five cases the time was under an hour; in eighteen cases over an hour and under two; in two cases more than two and less than three hours; and in four cases the bandage was not removed for over three hours. In many instances—indeed, in Dr. Reid's first case—the combined treatment of bandage with instrumental compression has been employed. Thus, Mr. Wagstaff applied the bandage fifty minutes, followed by two tourniquets for six and a half hours; loosely, for eleven and a half hours, and more loosely for eleven hours more.

Heath records a case, also, in the *Lancet*, Vol. II., 1876, in which the bandage was employed for an hour, Liquorini's tourniquet for five hours, and loosely for two days longer. In T. Smith's case the bandage remained on the limb for an hour, Liquorini's tourniquet for two hours more. Mr. Tyrrel used the bandage for fifty minutes, digital compression for two hours, and a compressor at the groin for some time after. In fact, in many of the recorded cases a combined treatment seems to have been necessary.

While upon this subject it is important to bear in mind that the rapid method is not devoid of danger, and that Mr. Gould, in his tables, records deaths during or shortly after the treatment; one occurring in the practice of Dr. Weir, of this city, and published in the *Medical Archives* for April, 1880, in which the autopsy showed fatty degeneration of the heart. The second was under the care of Mr. F. A. Heath; the post mortem revealing a ruptured aneurism of the aorta. The third was under the charge of Mr. Rivington, and was peculiar, in that a small aneurismal tumor below the right knee had been opened and a diffuse aneurism created. The Esmarch was applied and gangrene resulted. The examination after death revealed a rupture of the anterior tibial artery. In a fourth instance, after the aneurism had consolidated, gangrene, also, made its appearance and amputation was resorted to, but the patient perished. It has been argued that in all these cases the demise was not caused by the treatment, but it appears to me that strong evidence may be adduced to the contrary. It must be remembered, that

by accurate calculation, it has been found that in applying the Esmarch bandage from the toes to the middle of the thigh in a man of 168 or 170 pounds weight, about one pound of blood is forced back into the circulation. Those who are familiar with transfusion will remember that often an ounce or two of blood thrown into the vascular current produces the most severe palpitations and cardiac commotions; it may, therefore, readily be seen that such an amount of sudden tension as would necessarily follow the introduction of so large a quantity of blood into the body, might so overtax a weak heart as to cause it to readily break down; or, if an aneurism existed (as was the case in that under the care of Mr. Heath), a rupture of an internal aneurism might result from sudden arterial tension, or an atheromatous artery give way, cutting off all blood supply, and gangrene be readily produced. With these few remarks on the subject, a case in point is here introduced:

Jan. 31, '83. Jefferson Chipman, age 61; occupation, carpenter; came from New Haven, Conn., to be treated for a large sacculated aneurism of the popliteal artery of right leg. The pulsation could be plainly seen by the class at the clinique, and by placing the hand on the aneurism, the blood force was quite sufficient to move it at every pulsation. I then sent him to the Hahnemann Hospital for preparatory treatment.

On Feb. 7 the patient was again brought to the college, having for seven days been under supervision. During that period his diet consisted of eggs, milk and farinaceous food, with a small piece of meat each day. The elastic bandage had been applied fifteen minutes every night and morning and the circulation been arrested three times in the course of 24 hours by a compress at Scarpa's space, which was allowed to remain as long as the patient could bear the pain. He was kept recumbent and not allowed to assume the erect position under any circumstances. At the college the patient was placed on the bed he was to occupy and brought into the amphitheatre. Dr. Pratt was present, as was also Prof. Dowling, who, at my suggestion, made a physical examination of the patient, and reported that he found his vital capacity to be but 110 cubic inches, being less than normal; his breathing was principally abdominal, the intercostal spaces were well marked, and the excursions of the ribs in breathing were almost imperceptible. There was also a feeble systolic murmur heard at the apex of the heart, probably the result of an endocarditis, from an old inflammatory rheumatism—a mitral regurgitant murmur. A sphygmographic tracing of his pulse had also been taken, in order to illustrate to what amount the arterial tension would extend after the bandage had been applied.

At 2:15 P. M. I carefully put on the Esmarch bandage, winding it tightly from the toes to lower border of the aneurism, over which it was turned lightly, while above it was drawn tightly again. This forced all the blood from the extremity, except that in the aneurismal sac, into the trunk, and thus a *complete* stasis in the tumor gave opportunity for the formation of a true blood clot. The bandage was fastened by the rubber strap, after which it (the bandage) was removed, leaving the limb completely blanched and cold.

The pain soon began to be somewhat severe, but the patient bore it bravely for 15 minutes, and was then put under the influence of ether. The leg rapidly lost its warmth, as was shown by the thermometer applied to the foot. Twenty minutes after the treatment commenced the mercury stood 96 deg. The respiration and heart's action were closely and carefully watched by Prof. Dowling, who also at this time took another sphygmographic tracing of the pulse, which showed a marked difference from the first, this one being dicrotic, pointing decidedly to a great amount of arterial tension. I herewith present these tracings to the society:

3 P. M. The clot could now be distinctly felt, filling the sac, which was four inches long and two and three-fourths wide. The temperature of the leg went down to 95 deg., and as the bandage had now been applied for 70 minutes, it was deemed proper that it should be removed.

3:25 P. M. A tourniquet was then adjusted to the femoral artery in Scarpa's triangle, after which the rubber band was gradually loosened and finally removed. The collateral circulation was somewhat established, as the pulsation of the lateral arteries could be felt.

The patient was then removed to the adjoining room and the tourniquet kept on until 8 P. M., the patient being under the influence of ether most of the time. When the tourniquet was unscrewed a slight pulsation could still be felt in the tumor, and as a matter of safeguard, the leg was genu-flexed and held in that position by the rubber bandage during the night, pending the continued treatment next day. The patient passed a fair night, sleeping at intervals.

Feb. 8, '83, 9 A. M. The rubber bandage was removed. There was no increase in the pulsation in the tumor, but the foot was cold. I then resolved to finish the treatment by digital compression, and as several gentlemen who were present volunteered their services, it was begun at once. The foot had recovered its natural temperature, but the patient complained of great pain in the leg. The following is the record:

1:10 P. M. Leg extended. Digital compression applied.

2 P. M. Temperature 99½°. Tumor hardening. 1¼ oz. whiskey given. Pain severe.

2.20 P. M. ⅛ gr. morphia administered; suffering great pain; tumor feels hard and quite firm.

2:45 P. M. Temperature 96⅘° ½ oz. whiskey.

4:30 P. M. Pulse 94 and intermittent. Temperature 103°.

5:45 P. M. ½ oz. whiskey given.

6:15 P.M. Pulse 94. Temperature 99⅗°.

At 6 P. M. I divided the class into sections of five, each section to keep the digital compression for two hours, and each member of a section being allowed to exert pressure for twelve minutes each hour.

6:15 P. M. First class came on duty. During their watch the patient ate his supper, consisting of oysters, toast and coffee. Smoked his pipe and said he enjoyed it. Took 1½ oz. whiskey. Complained of great numbness in the calf; says his foot feels hot. Tumor quite firm. No pulsation.

8 P. M. Second class came on duty. Temperature 99⅘. Pulse 90.

9:10 P. M. Tumor hard, no pulsation.

10 P. M. Third class came on duty. Pulse 96. Temperature 99⅕°. No burning in foot; comparatively easy.

10:37 P. M. ½ cup of coffee. 11 P. M. Smoked.

11:30 P. M. ⅓ gr. morphia given. Suffering some pain.

11:45 P. M. Passed catheter. Drew six ounces of urine. Took some whiskey.

12 P. M. Fourth class came on duty. Pulse 96. Temperature 99⅘.

Feb. 9, '83. 1:05 A. M. Slept since 12:45.

1:20 A. M. Slept for fifteen minutes. 1:45 A. M. Restless; sat up in bed.

2 A. M. Fifth class came on duty. Pulse 85, temperature 99⅘. 2 oz. whiskey.

2:10 A. M. Pulse 96. 2:30 A. M. Went to sleep. 2:40 A. M. Woke up, but dropped to sleep again.

2:45 A. M. Complains of being chilly.

3:10 A. M. ½ cup of coffee.

3:15 A. M. Complains of burning in his leg. 3:25 A. M. Asleep.

3:35 A. M. While sleeping pulse 79, intermittent and weak.

3:45 A. M. Awake; pulse 90, full and more regular. 3:50 A. M. Passed a pint of urine.

4 A. M. Sixth class came on duty. Temperature 99⅘°. Pulse 85 and intermittent.

4:20 A. M. 1 oz. whiskey.

4:45 A. M. Pulse 85. Went to sleep.

4.55 A. M. Awake, took a drink of water. 5 A. M. Complained of pain. Wanted ankle rubbed and head raised on the pillow. 5:15 A. M. Pulse 85. 5:25 A. M. Small drink of water.

5:28 A. M. Complained of pain in foot and back.

5:37 A. M. Dropped asleep for a minute. Awoke with a start, said he dreamed he was carrying a board and it fell.

5:55 A. M. Drank some water, smoked his pipe, complained of pain in his back and burning in his calf.

6 A. M. Seventh class came on duty. Pulse 90, temperature 99⅕.

6:30 A. M. Pulse 86, quiet, napping most of the time. 7 A. M. Pulse 86, quiet and taking small drinks of water. 7:55 A. M. Pulse 87, temperature 99½. Says he is very comfortable.

8. A. M. Eighth class came on duty.

8:50 A. M. Pulse 90. Ate two eggs, cup of coffee and slice of toast; seems to have a good appetite—things taste good.

At 8:52 A. M. I discontinued the digital compression, found the tumor firm and contracted to half its original size, perfectly circumscribed and without the slightest pulsation. I pronounced the aneurism cured. The record then continues:

9:15 A. M. Temperature $100\frac{1}{10}$. I lightly applied the rubber bandage to the knee merely to support the tumor. Patient slept well.

10 A. M. Woke, felt very comfortable. No pulsation in tumor since the pressure on the femoral artery was removed.

2:30 P. M. Collateral circulation not yet fully established, in consequence of which the limb is not as warm as the other. Patient comfortable and anxious to see his wife and relatives. Feels good enough to get up. No pain; slept considerably during the day, but around the limb a faint blush of erysipelas appeared, which gradually increased during Sunday, and gave me great anxiety; on Sunday night the whole leg was affected, and a true phlegmon appeared. *Bell.* and *Rhus.* were given and cooling lotions applied. On Monday the symptoms were better; on Tuesday, excepting some œdema of the leg, the patient was comparatively comfortable, and although the most positive injunctions to remain quiet were given, he walked about and sat upon a commode, straining to pass his fæces. I learned afterward that two cases of erysipelas were, or had been in the wards of the Ophthalmic Hospital a short time before.

On Wednesday, February 14, '83, Chipman was brought before the class to show that the aneurism was cured. He was somewhat weak from his experience of the previous week, and wanted to go home, to which I rather reluctantly consented. The patient was profuse in his thanks for what had been done for him, and hoped he could repay in some way. He left on crutches, weak, but cured.

The time occupied in the treatment was as follows: The Esmarch bandage was applied for 70 minutes; the tourniquet for four hours and thirty-five minutes, with digital compression eighteen hours and fifty-two minutes, making in all, twenty-four hours and thirty-seven minutes of actual treatment, with an interval of rest, save genuflection of seventeen hours. I am of the opinion that half the time given to the digital compression would have sufficed, but I was so desirous of making sure of the clot, that I continued the pressure for the time specified. I am not also by any means certain that the interval of rest did not also retard somewhat the formation of the clot, although the leg was genu-flexed.

The question now remaining to be more fully considered is how the cure is wrought by this method of treatment.

In all the cases of death recorded by Mr. Gould, examinations, *postmortem of the aneurism*, showed the following appearances: The clot found in the aneurismal sac was of the mixed variety, soft and not fully organized in the centre; whereas that which occluded the artery had become a perfectly organized substance—a true fibro-cellular tissue. This difference, however, in structural formation is readily explained. An Esmarch is applied in the manner I have already described Of course, before any treatment had been adopted, the cavity of the aneurism would contain the external laminated fibrinous clot caused by the whirling of the blood through its cavity. So soon as the circulation is entirely cut off, a true blood clot forms, a clot which, if the blood be in a healthy condition, and surrounded by normal structures, is capable of becoming transformed into fully organized substance. But this clot, viz., that within the tumor, is *not* surrounded by healthy tissue; it is in contact for most of its circumference with simple, unproductive fibrinous deposit, containing neither blood-vessels nor nerves, which is again overlaid by the distended, and very often diseased, arterial walls; therefore, there are no favoring circumstances for further complete organization; yet the clot is of sufficient plasticity to obstruct the passage of blood into the tumor when the pressure is removed from its cardiac side.

Let us see now what happens: The pressure is "let up," the blood flows speedily down along the vessel to the aneurism, and there is arrested by the clot within the tumor. No sooner does this stoppage in the circulation take place, than a clot immediately forms in the vessel, and is at rest at its aneurismal side; still the blood flows on, the clot extends upward in the tube, there is an additional amount of leucocytes and red blood-corpuscles packed together, which generally continues up to the first anastomotic branch, where the division of the blood stream causes the further formation of a true blood clot impossible. The walls of the artery are in a healthy condition, well nourished by arteries, veins and nerves; by their amœboid motion the leucocytes begin rapidly to adhere to the internal wall of the vessel, and, as is well known, cell development and stable corpuscles are formed, until finally a consolidated and completely organized plug fills up the artery, and thus the aneurism is cured.

If, on the other hand, from a poor condition of the blood, or increased disease of the arterial wall, a very unstable clot is formed within the aneurism, then upon relinquishing the pressure on its cardiac side, the clot is not able to stand against the *vis a tergo* of the blood stream, and is disintegrated and washed out, and the result is a failure.

Therefore, the process of cure depends first, upon a blood clot within the sac, of sufficient stability to obstruct the arterial flow; second, and more especially, upon the obliteration of the vessel by the formation of a fibro-cellular plug within the tube.

APPENDIX.

This paper had been prepared and was in the hands of the type-writer, when I accidentally heard a report that the patient, *Chipman*, whose case I have just recorded, had been obliged to submit to amputation. I immediately wrote to Dr. Crisand, who had the case in hand while here, requesting him to inform me, if such were the case. I append his reply, and it is exceedingly interesting, because it bears out the description I have already given of the *rationale* of cure, and agrees in every particular with the appearances of the clots as just described, all of which was planned before I was even aware that the patient was not perfectly cured. The letter I give *verbatim*, and would call attention to the doctor's description of *the* two clots, as he has given them:

" 38 VERNON ST.,
" NEW HAVEN, CT., *Apr.* 3, 1883.

" DR. WM. TOD HELMUTH,
" 299 Madison Ave., New York.
" Dear Professor:—

" Yours of the 2nd inst. rec'd. I regret very much that it is a fact that Chipman is now in the 'Happy

Hunting Grounds,' or somewhere else. Two days after I brought him home, symptoms of gangrene appeared in the foot, and the leg became mottled and looked very angry. In spite of the exhibition of Ars, and other remedies and adjuvants, the gangrene rapidly developed, the toes dying first; then the instep, and finally the ankle, the disease rapidly extending to the upper third of the leg. At first, Dr. Dorman hoped to save the foot, but it soon became evident that this was impossible. Then it appeared as if a line of demarkation were forming about the ankle, but there was not sufficient vitality in the parts to bring about sloughing of the dead tissues, while the surrounding parts were perishing very rapidly. Dr. Cole, of Bridgeport, was called in consultation, and he advised delaying the amputation. Charcoal poultices were applied, and with seeming good effect for about a week; but all efforts were fruitless, the tissues about the external malleolus were dead down to the bone, and the whole foot and leg up to the knee were perfectly sphacelated, and so continued until death, which occurred on the fourth day. None of the means employed appeared to arrest the persistent emesis.

"*On examining the aneurism we found that it contained three thick layers of fibrin, and a soft clot in the centre, about one and a half inches in diameter. The clot in the femoral artery, just above the aneurism, had become entirely organized into tissue.*

"Dr. Dorman has preserved the specimen, and he intends to send it to you as soon as an opportunity offers itself. The doctor was untiring in his efforts to save the man's limb, but it was of no avail.

"Since his death we have found out that Chipman had syphilis a few years ago, and up to the time he came down to New York, he had a chronic diarrhœa for over a year.

"This is about as much as I can tell you about the case, but if you should want it in detail, I can get it for you at any time, with pleasure.

"Respectfully yours,

"CHAS. CRISAND."

MASSAGE AND INTERVASCULAR CHANGES.

BY GEORGE H. TAYLOR, M.D., NEW YORK.

The student in physiology is surprised at the vast amount of mechanical transition of fluid that is required for the maintenance of function and the supply of the outgoing energies of the organism. The fluids daily entering the digestive cavity from the blood has been estimated to equal in weight the whole fluid of the body, nearly all of which is re-absorbed to continue the same unceasing work. This will afford some intimation of the amount of transfer of fluid required to maintain the activities of the muscles, nerves, secreting organs, heat making, etc.

For the muscle cells, as well as those of all vital parts, are not supported by the blood directly; this fluid remains within the vascular walls, while only its plasma, bearing both nutritive material and oxygen, transudes through these walls to come into immediate contact with the vital cell-walls. The cells are thereby enabled to appropriate such material, according to its special function and purpose, as may be required for their use. The support of the vital cell, both as respects digested matter or peptone and oxygen, appear to be determined, not by the exterior supply, but the interior activity which alone can attract the supply.

On the other hand, the products of cell change pass freely from the cell interior coincidently with their production. The transfer of matter attends all development of energy, whether in the form of heat, muscular power, or both. So that materials are constantly changing place, passing into and from the intervascular space from two sources—the blood vessels and the vital tissues—the mechanical being an indispensable preliminary to the vital operation.

The transfer of matter between two important points involves, of necessity, an intermediate space, which is represented above as containing fluid in motion, or rather fluid bearing different, even antagonistic chemical ingredients, whose destiny is determined by their chemical nature in opposite directions. A portion is drawn to the acting vital structures, while another portion tends in the direction of the venous capillaries. This latter, in good health, is composed largely of carbonic acid in solution, and water, because these form the bulk of the products of those changes whereby energy is evolved. These are taken by the venous side of the circulation and are immediately conveyed through the lungs to the atmosphere. Other portions are re-submitted to the vital chemistry; only a comparatively small portion, consisting of perfected nitrogenized waste, with saline matter, being conveyed through the kidneys from the system, while a large amount, not having completed the chemical changes whereby energy in some form is dissociated, and after obscure changes in the liver, is returned to the nutritive system by being again submitted to the digestive process.

It is not intended to convey the impression that the intervascular fluid normally occupies a distinct space set apart for its use, but that the transit of matter involved in all nutritive acts, which is from the interior of the capillary blood vessels to the interior of the vital cell, implies its passage through the two intervening walls, and in most cases intervening connective tissue and adventitious substance. During this passage the complex contents of this fluid are liberated from the vital control of both the cell and the blood, and are exposed to influences either of a medical or morbid character that may by art or by accident be brought to bear upon them.

Any mechanical change of place, in either the blood vessels on the one side or the cell-contents on the other, of necessity involve the corresponding changes of place and of matter in the intervascular fluid; being situated between the two, it is exposed to influences from the two sides. This fluid is, therefore, an extensive arena for the physical side of physiological activities, and it consequently offers an opening through which additional energy of a physical description may be introduced, whenever such increase may be deemed subservient to physiological interests.

The proper nutritive support of the vital cell demands contact with successive portions of the fluid bearing the materials it requires—peptone, sugar, salines, etc.—only secured by its motion. Equally essential is the motion of the fluid which bears away the spent material, exhausted of its energy. So that during active nutrition, whether the outcome be heat, dynamic or nervous power, there is mechanical transition of what constitutes intervascular fluid; that is, of all fluid intervening between the blood vessels and the vital cells.

These changes of place are clearly referable to muscular action. The intervascular fluid may be considered as enmeshed in the muscular and connective fibres, somewhat as fluid is contained in a sponge, which on being squeezed is displaced, thus giving place to fresh supplies. The muscles at every contractile act cause minute currents to circulate about the vital cell and every distinct and individual fibre, thus constantly refreshing them with new nutritious matter, to be appropriated in accordance with the interior needs.

The blood currents, as we have seen, are, in fact, urged forward by the same muscular acts, and their onflow appear to assist in some way the conditions for the qualitative separation of the complex ingredients of that fluid.

The medical importance of this intermediate point in nutritive operations may now be more fully appreciated, since it is on *physical* relations at this point, both mechanical and chemical, that the quality of vital operations depend; it is here that impediments highly inimical to health may exist, and it is here that the physical side of vital function may be easily so reinforced as to

XUM

perfect the vital product. The fact of the existence of intervascular fluid, and especially of its pathological importance, is a matter of every-day experience, whenever a local swelling appears on any part of the body.

Whatever be the special nature of the abnormal local increase of substance, the cause is arrest of the onflow of the blood in the vessels. There may be local mechanical injury to the capillaries, or mechanical destruction from accumulated corpuscles, or the cause may be found in the abnormal chemical quality of the effused fluid. In either case, this fluid distends the tissues, increasing the intervascular fluid to abnormal proportions, instead of returning to the venous side of the circulating vessels.

The mechanical requirement is obvious. It consists in the need of reinforcing the activities which cause the onflow, not only within the capillaries, as has been previously explained, but also exterior to them.

The entire relevancy of motion supplied to the intervascular fluid from some adequate exterior source, will be easily understood, for the usual impulse derived from the action of the muscles is unavailable. The local affection enforces suspension of muscular contraction; the muscle cells themselves participate in the local affection and are in no condition for work. The morbidly incited nerves proceeding from the affected part involve the whole nervous system in sympathetic irritability, which it is injurious to increase by direct impressions. Besides, as we shall hereafter understand more clearly, if these obstacles were absent, it would be injurious to the part, under the circumstances, for the local muscles to act.

Hence, the need for exterior assistance. This is usually afforded by means which will increase and at the same time dilute the contents of the capillaries. Contact of the exterior skin with pure moisture, as the application of a poultice or a wet compress, is very useful in this direction, as universal experience testifies. Endosmosis, or the imbibition of water, adds to the capillary contents, and thereby increases the onflow, and at same time serves to detach the adhering and obstructive corpuscles.

The good effects of local wet applications, as poultices, etc., are, however, quite restricted. Their effects are entirely superficial, and they are, therefore, inoperative for the relief of the deeper seated local affections; they are not only inefficacious for vital stimulation or incentive, but serve rather to repress interior cell changes through which heat and energy are evolved, and the wasting materials are oxidized to the proper degree for exit, and they are, therefore, powerless to improve the quality of the intervascular fluid, or to fit it for re-entrance into the circulation. This effect of restraining tissue change, especially those of the nerves, produces, however, the agreeable consequence of mitigating pain, for which effect exterior wet applications are justifiably employed.

The mechanical aid supplied in the muscular power of another person, as an operator, properly directed, is quite sufficient to comply with the medical requirements for dispelling swellings composed of intervascular fluids. The mechanical impulse thus imparted is not only equivalent to that supplied by the muscles of the part in health, but has the advantage of being entirely adjustable to the individual case whatever be the emergency. The local irritation and probable injury of the local muscles may be entirely obviated, while the mechanical impulse, if need be, may be carried to a much greater and all-sufficient extent.

True remedial effects are, however, to be secured only by compliance with certain inflexible conditions. The non-recognition of these is failure, especially in difficult cases. These conditions involve on the part of the physician and operator a correct knowledge of the physical state of the tissues, and of the relations of the power transmitted, to their deteriorated condition.

This matter is so obvious that it might be left to the control of common sense, if, unfortunately, that useful commodity were not so often lost sight of the moment one begins to think of remedies. The operator left without this guide feels impelled to expend a great deal of unnecessary force in the direction in which it will certainly do the most injury—on parts least capable of withstanding mechanical impressions.

So important are the principles involved in the application of massage for the relief and cure of local affections, especially those denoted by the fluid accumulations which constitute swellings, that a brief summary will here be subjoined, somewhat anticipating what will appear more fully in connection with description of processes.

1. It is practically futile to attempt to displace or urge forward local accumulations of interstitial fluid, whether held by the tissues or contained by the local capillaries, till the *obstacles* to such onflow are removed. A free channel must first be provided in the intended direction, or no actual progress is possible. The forces which control the circulation of the blood in its vessels must first be incited to effective activity, for through that channel only can the local accumulation be drawn away. Otherwise local massage will certainly be injurious and not in the least degree helpful.

2. Localized manifestations of disease, the usual attendant of intervascular effusions, produce pain, and, therefore, increased nutritive activity of cerebro-spinal centres, communicating with the local affection through the nerves. This fact supplies the caution against further inciting the affected part by direct mechanical impressions. It also further implies the need of repressing the undue nutritive activity of nerve centres coincident with pain, by judicious counter-impressions, diverting nutritive support to other uses. The general muscles are the counterpoise nature furnishes against excessive innervation.

3. Any considerable increase of intervascular fluid distends, thins, strains and weakens all the tissues entering into the composition of the part thus affected, and, therefore, diminishes the resistance these can offer to mechanical impressions. Under these circumstances, such mechanical impressions as would be well adapted to the need of unaffected parts would be liable to inflict serious injury on parts diseased, and must be greatly modified to become so adapted:

The practical basis for securing remedial effects, extending to each of the conditions named, is sufficiently broad. If massage be first applied to the sound parts, quite beyond the seat of local disease, it will be found not only agreeable, but that its remedial influence extends quite through the suffering part, and in a curative manner. By this procedure the stagnant fluids are drawn from the distended part, and relaxation succeeds tension of fibres. The sensory activities diminish, and very soon gentle applications of massages—always being careful that the sensations are agreeably impressed—become strengthening to the vital fibres of all kinds, and the local health rapidly returns. Especially is this realized, when the chemical activities next to be described have made some progress.

EFFECT ON HEAT, OXIDATION AND ELIMINATION OF MUSCULAR ACTION.

All manifestations of muscular and nervous power are accompanied by the production of heat, and also by corresponding discharge of oxidized products, principally carbonic acid and water, from the body. These phenomena bear not only an intimate, but an inseparable connection—they rise and fall together, in amount and degree.

The approximate evidence of these statements lies directly within everyone's personal observation, and consists in increase of functions accessory to heat production proportionate to the muscular and nervous energy liberated. For, on taking vigorous exercise, as

running, climbing, etc., does not the respiration become more rapid and deep? And on sudden exposure to cold, do we not also deeply inspire, holding the inspired air for a moment under increased pressure? Even when sitting at our mental tasks, do we not often find ourselves instinctively stimulating and re-enforcing our thinking powers in a very similar way?

Heat production appears also to be the concomitant of the subordinate functions. The heat of the digestive organs rises during these periods of activity, and this is likewise proved of special secreting glands, as those of the mouth; the heat of the head rises a half degree during cerebral activity, and in spinal hyperæsthesia the feeling of increase of heat is scarcely less troublesome than that of heightened sensibility. Says Foster: "All the internal work of the body, all mechanical labor and internal muscular mechanism, with their accompanying friction, all the molecular labor of the nervous and other tissues, is converted into heat before it leaves the body;" showing conclusively that deficiency of heat is accompanied by deficiency of these changes in matter from which other forms of energy are evolved. This energy comes from the use by and among the tissues of oxygen. "Irritable living muscular substance, like all living protoplasm, is always respiring." "There will always be, in fact, a stream of oxygen from the blood to the muscle, and of carbonic acid from the muscle to the blood." "All available evidence goes to show that oxidation takes place in the tissues, and not in the adjoining blood."

As Liebig expresses the physical side of vital action, "The phenomena of life are always manifested by organized matter passing from a higher and more complex to lower and simpler forms." The corollary of this statement, that the rate of consumption of oxygen and the expenditure of energy rise and fall together, is apparent.

DEFICIENT MUSCULAR POWER AND DEFICIENT HEAT.

Chronic affections of every kind and degree are characterized by both deficient muscular power and deficient heat. The invalid has both an inaptitude and positive inability for exertion; at the same time, suffers want of heat, and especially from its unequal distribution. The local sensations of heat, as in the head, spine, or other region of excessive sensibility, does not in the least conflict with the general truth of the statement, that deficient heat production is the constant concomitant of defective muscular energy.

These statements are in accord with those of leading physiologists. Foster says: "The muscles are the thermogenic tissues of the body;" "The waste of heat, and consequently its production, rise and fall with exercise;" "As much as five times the amount of heat is produced in vigorous exercise as at rest;" "It is probable that even during rest the muscle-cell is quietly evolving heat, and employing nutritive supplies for that special use, that, in action, would be largely converted into the form of motion-energy." Whenever heat production is increased, respiratory motions are also increased.

The general principle that the vital system is an extensive arena for chemical activity, in which oxidation, or the use by the vital system of oxygen, is coincident and co-equal with function, or the evolution of energy, leads to the consideration of the results and products of this chemical activity.

On the one hand, we have the evolution of muscular and nervous energy and heat; on the other, new forms of the wasting tissues, and the changed products of digested food in chemical union with oxygen. These pass freely from the lungs, kidneys, skin and alimentary canal.

The proportions these bear to each other in health, in comparison with the deviations consequent on disease, are fraught with instruction as to the requirements of the system in the latter condition.

At each respiratory act, four or five per cent. of the twenty-one per cent. of oxygen contained in respired air, disappears, and is replaced by carbonic acid. The blood circulating freely through all the tissues, is the carrier of oxygen to the tissues, and also the carbonic acid from them to be returned by the lungs to the atmosphere.

The amount of oxygen disappearing, and of carbonic acid produced, depends, in health, strictly on chemical changes superinduced by vital action in the tissues. Thus, *enforced* respiration, that is, made deeper and quicker by the will, in the absence of increased losses by heat, muscular and nervous power, *fails to increase the amount of oxygen taken up by the blood.* Any excess beyond legitimate use for tissue change, is returned in the expired air, and is not retained by the blood or by the tissues of the body. To increase the amount of oxidation in health, *it is, therefore, necessary to increase in the tissues the need of oxidation.* It is one of the practical, but too often unrecognized, functions of medicine, to incite various physiological activities, which result in increasing the relative, often the actual use by the system of oxygen; normal oxidation in health bears a necessary strict relation to the ingesta.

DEFINITE PROPORTIONS.

The products of vito-chemical change constantly passing from the organism, equal in health to the whole of the ingesta with oxygen added, are necessarily the same for equal amounts of energy coincidently developed. That is to say, carbonic acid, water and other perfected products passing from the body are associated with definite amounts of energy also simultaneously liberated, whether such liberated energy takes the form of heat, muscular or dynamic power or nervous power, and whether the expenditure be within the organism, or in part exterior to it. Such results would at least accord with the analogies of chemistry in the inorganic as well as the non-vital organic world. No reason has been assigned for the existence of other laws of development of energy within the organism, than those we are familiar with exterior to it. It is, therefore, doubtful if the evolution of vital power, in either its muscular or nervous phases, can result from a variety of chemical operations; on the contrary everything points to the probability of uniformity.

But we all know that a great variety of combinations and separations may occur in the same substances, including nutritive matter, according to the circumstances in which these are placed. It follows that corresponding variations are possible in the vital organism, according as the matters submitted to it are fully, or only partly, subjected to its control. While the chemical products of the vital cell, arising in connection with the development of mild energy, are probably uniform fully reduced organic substance, that is, carbonic acid, water and urea, other products will, of necessity, arise from insufficient oxidation of intervascular substances, which fail to reach completion, and, therefore, fail to become disengaged from the system.

PHYSIOLOGICAL OXIDES, PATHOLOGICAL SUB-OXIDES.

There is much evidence pointing to the conclusion that the oxidizing function is progressive, and that the completed stage, occurring simultaneously with discharge of energy in some of its forms, may be preceded by inferior stages of the process, in which the appetency for oxygen or nutritive supplies is not fully satisfied, and in which the control of vitality over organized matter is incomplete. This class of material circulates with the blood and is an abundant constituent of the intervascular fluid. It is of every possible variety of chemical quality, that may possibly pass into the system through the digestive boundaries, or that may spontaneously arise through defect of vital processes, all alike waiting for use by the vital system, that is to become oxidized. These matters may for convenience of study be classed under one common designation of *sub-oxides.*

XUM

The fact of progressive oxidation, and therefore of the existence of sub-oxides, is amply provided for in the animal organism from the lowest to the highest. The consideration of this fact is replete with therapeutic suggestion.

The provision referred to consists in such organs as the liver and the spleen. The function of the latter appears to be determined as that of providing against injurious consequences of irregular ingestion and the necessary perturbations that might arise from extreme alternations of nutritive supplies to which all are exposed. While one function of the liver is conceded to be that of withrawing sub-oxides in all their degrees and qualities from the system, and to cast them reduced by its wonderful chemistry to something of uniformity, into the digestive organs, through which this whole class of materials, in connection with fresh supplies of ingesta, are re-submitted to the chemistry of the whole organism.

Pathology has doubtless intimate connection with injurious quantities and qualities of sub-oxidized matter, and the disturbing consequences of which this is the initial cause. Excess in quantity of sub-oxides remove them proportionately further from vital control; and they, of necessity, assume erratic chemical forms, probably less amenable to the ordinary or physiological reducing agency. The oxygen supplied is inadequate in amount to the requirements; and the usual and necessary physiological incentive to the completion of the oxidizing act becomes too weak to fully secure the physiological end.

The special chemical nature of sub-oxides, and the variety of spontaneous forms assumed, we can only know through the effects arising therefrom and variously classified as symptoms and diseases. The consequences in local blood stasis, in its varied locations and aspects, have already been noticed. To these, which may be considered the mechanical side of pathology, may now be added that of *quality*, or the *chemical* side of pathology, both of which are necessary constituents of every deviation, both of physiology and pathology. The physician, in other words, has to deal both with processes and products arising from defective processes.

Those disturbances and deviations from health, which are called chronic diseases, plainly denote in various ways the presence of sub-oxides. Sometimes the fact is conspicuous in the secretions, the general character of which throughout the system is shown by the coating on the tongue, indicating unreduced albumenoids returning to the digestive organs; nearly always by a comparatively dry skin and diminished quantity of urine, and the presence therein of a large amount of *extractives*—matters which have failed of complete reduction; sometimes it is accumulation in and consequent distension of local capillaries, with stasis and excessive intervascular effusion, followed by degeneration of this fluid and possibly of the tissues in contact. This latter consequence being possible, indeed probable in any tissue of the body and in any of its parts, is consequently a very common consequence, and often serves to give special form and name to the disease, although having a common source with other and perhaps widely different local and technical forms, in incompleted vito-chemical products.

Greater obscurity, perhaps mystery, is encountered, when it becomes evident that important interior organs are suffering, as the liver, or the digestive apparatus, or the glandular system; but the view of causes above given will seem to remove much of the obscurity, especially when the therapeutic indication derived from this view of pathology is practically carried out. The consequence to the central nervous system of sub-oxidation is often more serious than to any other department of physiology, more particularly as the functional returns to sub-oxidation are not so clearly seen. The medical prescriber, in these cases, following prevailing views, is almost certain to inflict damage in his futile attempts to allay symptoms, in opposition to causes in full play; for acting upon the delicate nerve-centres, whether by means of drugs or mechanical methods, is eminently adapted to increase instead of diminishing the local difficulty. This tissue is dependent on the muscles for nutritive support in disease as in health.

Even ordinary medical practice, philosophically considered, affords ample corroboration of the view of primary pathology here presented. For what are so-called *stimulants*, the constant recourse in failing health, if not incentives to oxidation? The favorite remedies included under the class of *tonics*, in a similar way promote temporary increase of irritability, which during the effect cause a more vigorous and rapid aeration of the blood. Alterations are simply temporary substitutes for the deficient oxygen, as may be seen from their general chemical characteristics. Other drugs, especially those of the more decided and potential chemical attributes, as the alkalies, incite by their pressure more pronounced chemical aptitudes, even of the normal and physiological form, but hardly add to the capacity for health. Even the *sedatives*, in an indirect way, confirm the principal now illustrated. They partially inhibit physiological activities, excepting the respiratory, and allow time for oxidation to acquire temporary ascendency.

The reasonableness of these views become the more apparent when it is considered that nature has a uniform method of compassing her intentions in the physiological economy; this is by the use of oxygen, alike for rendering the potential energy in food, actual in heat and mechanical power, and for removing the *débris* of material from which energy has been dissociated, together with such impediments and obstructions, mechanical and physical, as constantly find their way to the intervascular fluid.

The chronic invalid is chiefly occupied by his sensations, and seldom inquires whether there be causes upon which they depend; he demands of the physician immediate suppression of pain, and other evidences of whatever may have produced the effects he desires abated, the physician is too apt in his endeavor to gratify his patient, to neglect the real affection, the incompleted changes of matter from which energy should be liberated, and prescribes remedies quite incapable of reaching the radical source of the disease, so far as this depends on sub-oxidation. The consequence is that his labors are too often devoted to the impossible task of removing effects, whose causes continue indefinitely unabated. This is the result of failing to discriminate the relative value of radical and palliative remedies.

HOW DUE INCREASE OF OXIDATION IS SECURED.

In health the motion communicated by the action of muscles to intervascular fluids, secures the removal of oxidable constituents. In chronic diseases, this becomes insufficient. There is less muscular action, and more oxidable matter. It may now be reduced by the motion derived from exterior sources, as the muscles of another person by massage.

The relevancy of the means may be readily understood. In ordinary chemistry it is well known that its operations occur only at insensible distances, that is, by contact of the elements engaging therein having mutual affinity. So long as separate, no union is possible. Motion causes successive moving atoms to come in contact; oxygen derived from respiration with oxidable material awaiting this only feasible avenue of exit from the system. Elective affinities are, in physiology, consummated only when the matters engaging therein are, through the circulation of the blood and the action of the muscles, brought in contact in the intervascular fluid. By repeated experiments of different physiological inquirers it appears that little or no oxidation occurs in the blood, the oxygen being retained as oxyhæmoglobuline in the blood-cells, and this element is free to exercise its

reducing functions only after reaching the intervascular fluid.

For rapid therapeutic effects, proportionate energy of contact is necessary. There should be supplied, not only motion with pressure, but such rapidity as is proportionate to the end sought. While a certain feeble rate of motion, which brings the materials into proximity, may result in the production of injurious sub-oxides, a more energetic motion causing actual collision with a degree of pressure will secure completed results, carbonic acid and water, which have only to be produced, to be at once quite removed both from the organic and chemical arenas. To increase the rate of motion communicated, is to proportionally increase the numler of changing atoms and molecules brought into collision in a given time, and consequently, the therapeutic effect.

This view of the function of motion in determining physio-chemical affinites, is well supported by scientific authorities. Says Liebig: "It is evident that impulses of motion are capable of producing attractions in organic bodies." "Mere mechanical motions suffices to modify the force of affinity in chemical combinations." "Motion is the cause of molecular arrangement." "If atoms are made to change their places or mode of arrangements by an *impulse from without*, another compound is formed." "Motion is the cause of molecular arrangements." "Motion (like heat) may be capable of producing alterations in organic forms." The efficacy of increased oxidation in removing erratic product of incomplete oxidation is recognized in the following: "In many diseases substances are produced which are incapable of assimilation. By the mere deprivation of food, these substances are removed, leaving not a trace behind; their elements have entered into combination with oxygen of the air." Such deprivation, is evidently equivalent to proportional increase of oxygen. Lehman, in relation to this subject, remarks: "When once the fact is universally admitted that the first thing to be considered in many diseases is to furnish a copious supply of oxygen to the blood, which has been loaded with imperfectly decomposed substances, and to remove as speedily as possible the carbonic acid which has accumulated in it, these observations (on the nature and effects of respiration) will have afforded us *true remedial agents, which exceed almost every other in the certainty of their action.*"

STATIC ELECTROTHERAPEUTICS.

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For one hundred and fifty years Franklinism has been used in medicine, and claims of a most stupendous character have been made for it as a therapeutic agent; as a superior curative agent to Faradism or Galvanism, the fact now remains unquestioned. There are certain diseases and temperaments that cannot be impressed by the other forms, but which yield a wonderful result through Franklinic treatment. Statical electricity acts both directly and reflexly, like other forms of electricity. It produces muscular contractions, if used strong enough and condensed enough, just as other forms of electricity. It acts as an irritant, like other forms. Its sedative and tonic effects are precisely like the others. This new form cannot be localized accurately; it must act upon the whole system. The difference in the effects of Franklinism, compared with Faradism or Galvanism, is of degree, and the fact is paramount that delicate ladies will bear this form of treatment with impunity, and are not frightened or rendered the least nervous by it, as might be supposed they would be. Up to within a recent period electricity for medical uses was produced from a single glass wheel. Its tension was low and its quantity small. It remained for a German, by the name of Holtz, to offer a perfect machine that would answer all purposes for the practitioner of medicine. In this apparatus you have a machine simple and durable, and capable of generating electricity of great tension and quantity. And by means of the Leyden jar condensers, and by increasing the number of wheels, both tension and quantity are within the control of the physician or operator.

The machine which the writer has been experimenting with is one of the largest made, containing four revolving and four stationary twenty-eight-inch plates of glass. Its condensers of Leyden jars have about twenty-four inches each of tinfoil surface. It gives with ease in all weathers an eight-inch spark, and a large quantity. It is inclosed in a glass case, within which a plate containing a quantity of *chloride of calcium* is placed as a drying substance to absorb the moisture.

Accessory to the machine are simply an insulating sloat or platform, on which the patient is seated, the various electrodes for drawing or giving sparks, and a rod connecting the stool to the machine. The motive power for driving the machine is furnished by water. It runs noiselessly, and not the slightest disagreeable feature is connected with its operation. In treatment by electro-statics, the patient is first electrified; in other words, the electricity is passed to the patient on the stand. Now, in order to produce a given result, or to localize the electrical therapeutic effect, we use an electrode. By approaching near to the body of the patient we get either a spark, spray, wind, etc., according to the form of the electrode which we attach to our earth connection. The electrodes consist of various kinds, viz.: the pointed wooden or ball electrode, the large and small brass ball electrode, the brass roller and covered roller for massage and spinal troubles, the pointed brass electrode and the ozone generator, all mounted on glass handles.

One most remarkable feature connected with this new process is the origin of a new current, *the induced*, and capable, like the currents induced by magnets and the voltaic currents, of producing considerable contractility; or by a slight change, this machine can be made to produce all the work of the best Faradic. Thus in static electricity the practitioner has at his command for curative purposes all the advantages and none of the disadvantages of the other systems.

From our own observations on the human subject and through experiment with static electricity, we have noticed a marked effect in *all forms* of nervous disorders. It has subdued in thirty cases the pain of sciatica, headache and lumbago, and in two hundred or more cases of nervous derangement it has radically cured the patients placed under treatment. At first this great result might seem like a fabrication, but the testimony of the patients themselves is the best proof we could submit to the intelligent public. In America statical electricity is but in its infancy. In France, we are credibly informed, there is not a physician of prominence who does not avail himself of its benefits for the chronic and obstinate nervous disorders the body is so prone to. In Germany the use of static electricity is greatly advocated, and but a few years will suffice to establish this form of medical therapeutics as the most reliable, most convenient and most adapted to all those cases in which internal medication has proven fruitless and unsuccessful.

We have such authorities as Prof. Clemens, of Germany, Schmanda, in Austria, and in France the illustrious names of Prof. Charcot and Dr. Vigouroux, who have contributed to place statical therapeutics on the high plane it is destined to maintain. From twenty minutes to half an hour is the specified time for patients to receive the treatment, although the writer generally gives but fifteen; that is to say, five minutes of the imbibition and ten minutes with the various electrodes, making a general electrical action throughout the the patient's entire body. The motions are made from above downward, in order to reduce the volume of circulation and produce regularity of the blood supply. The first application is made with the pointed wooden

electrode along the course of important nerves and blood vessels. If pain is localized, the pain is relieved by the wooden ball electrode. The spinal column, base of the brain, the articulations of the body, such as the elbows, knees, ankles and wrists, are especially treated by sparks. The spark is a peculiarly distinctive phenomenon of electricity, and, therefore, very naturally holds a prominent place in treatment by it. The patient being first insulated, the sparks are produced by them, the patient's body and the electrode, which is held in the operator's hand ; this, of course, having an insulated handle of glass. For hysteria, neuralgia of face, etc., for toothache and various other like maladies, this form of electro-statics proves an efficient remedy, allaying pain and producing a soothing and quieting action of the entire nervous system. For insomnia or sleeplessness, from an increased disturbance of the nerve centres, produced by overwork, either physical or mental, this acts like a charm, giving a peaceful, gentle and permanent rest of the mind and body. For those malignant forms of disease, such as paralysis of the entire side of the body, numerous cases are on record where astonishing results have been attained by its use. A prominent New York physician is on record as having cured one of the very worst cases of this form of disease. The strength, shape and volume of the sparks are, or may be, graduated to a nicety by the operator, from the minute prickle or tingle to a sharp blow, passing through six inches or more of intervening air.

The toughest fabrics are penetrated by the sparks, and the patients need not disrobe themselves of a single article of clothing. The treatment can be made through shoe leather to the feet and through the thickest of garments with greater facility than any other form. For producing muscular contractions, to excite the functions of organs and special senses, to stimulate the skin, and cure by reflex action, a metallic roller is employed. If the physician desires to reach a central diseased point in the body, sparks are drawn from the head and back of the neck; if local, from the affected part; if from a reflex, from the peripheral point which controls the reflex. Oftentimes, when the distribution of a nerve of motion can be reached, a spasm may at once be controlled by the simple numbing effect of a succession of sparks. In the relief of neuralgic pain the spark is in most every instance successful; often instantaneously (10 to 20 minutes). In all kinds of rheumatic pains its curative power is equally certain and rapid. Dr. W. J. Morton, who is an authority on this subject, has said that he has never found results at all comparable to the effects of static electrotherapeutics. The following case of progressive locomotor ataxia is chronicled by Dr. Wm. A. Hammond, as being cured by a prominent advocate of this form of electricity here in New York, November 24, 1880: Mr. A. L., aged sixty. During the past year patient describes very accurately the symptoms common to the neuralgic stage of this terrible disease. Present conditions: shooting, stabbing pains in the legs preceding changes of the weather. The same pain occurs in the arms. Patient often rolls in agony on his bed during a paroxysm of several hours, and though a strong man the pain is sufficient to bring tears to his eyes. No spot in his legs seems to be free from these pains, though they are worst in the thighs and great toes. The functions are impaired and rendered difficult; sexuality is abolished. Patient walks with heavy cane. Does not feel the ground well. Cannot walk in the dark well without retaining his hold on the wall or banisters. The above class of symptoms prove conclusively the character of the malady. The usual remedies were prescribed unavailingly, until static was used, the kind being insulation, and heavy sparks from the spine continued daily until twenty-two applications had been made. The pains disappeared at the end of the tenth application, and the patient returned to his home absolutely cured. Now, to sum up, the advantages to be derived by its use are: it is a nerve tonic and stimulant; to diseased or inactive muscles, it is a powerful stimulating agent; it assists the stomach to digestion. Is beneficial, therefore, in dyspepsia and other inactive conditions of this organ; it removes the torpidity of the liver, spleen, etc.; it regulates the action of the heart; it removes extraneous matters from the circulatory system by opening the pores of the body by stimulating the sweat glands to exude a gentle but effectual moisture; it is a rubefacient or remover of pain from the interior of a body to the exterior; it cures skin diseases such as eczema and like eruptions; it will stimulate the nerves of the eye and abate inflammatory affection of those delicate organs, and in certain forms of insanity, such as the incipient stages of melancholia and epilepsy, this has proved an invaluable aid. The following list of troubles have been treated and are improved by static treatment: Loss of sensibility or motion in any part of the body, dyspepsia, wasting of muscles, amenorrhœa, heart disease (angina pectoris), spasmodic asthma, aphonia or loss of voice, throat and lung diseases of every kind, locomotor ataxia, Bell's paralysis, congestion, headaches of every kind, chorea or paralysis agitans (shaking palsy), muscular contractions, constipation, cramp, paralysis, dyspepsia, dysmenorrhœa, deafness, eczema and other skin affections, epilepsy, nervous exhaustion, inflammation of and paralysis of the eye muscles, facial neuralgia, facial paralysis, facial spasm, gastralgia, hiccough, hysteria and the allied affections, frontal headache, hemiplegia, hypochondriasis, impotence, infantile paralysis, sleeplessness or insomnia, spinal irritation, lead palsy, acute forms of insanity, liver disorders, lumbago, marasmus, migraine, myalgia, neuralgias, obesity or excessive fat, hardening of the spinal cord, prolapse of uterus, consumption, prurigo, psoriasis, gout, rheumatism (all forms), sciatica, spermatorrhœa, spinal paralysis, sprains, spinal congestion, tetanus, tic douloureux, torticollis, hyperæsthesia of the uterus, diseases of the uterus, scrivener's palsy, etc., etc.

It is known to all those who have employed the exhilarating influence of mountain and seaside air, that to none is that influence more easily communicated than to the diseased. It is the stimulating property of that vital element of the atmosphere known as ozone, which is so healthful and invigorating. Mountain air contains it in large quantities. The sea air contains it also in considerable volume. Statical electricity generates it in immense quantities, a few revolutions being sufficient to produce enough at times to permeate every recess of one entire suite of rooms. The patient whilst sitting upon the insulated stand is bathed continuously in an atmosphere thoroughly charged with it. Every part of the room, the patient's clothing exhales this sulphurous odor, which in some instances clings to the apparel for days afterwards. No other branch of physical science offers more actual interest to the observer than the practical application of electricity. All the world have their eyes fixed upon this mysterious agent, which has already given place to the most extraordinary and most unexpected discoveries, and which every day still offers us new surprises full of practical consequences. We cannot help admiring this power, of man, who has found out, if I may so express myself, how to seize the lightning, master it, and conduct it wheresoever he pleases. He uses it to transmit his thoughts afar off, his writing, his words, and even the sound of his voice. He has been able to hold the brilliant but fleeting flash of the lightning and to use it to illuminate his streets and his public places. He has done more. This terrible engine of destruction, against which he does not know enough how to guard himself, he has introduced into his dwelling to light it and to replace his tired or careless arms. He has even manufactured this formidable element and utilizes it in all the branches of industry. He has made of it a machinist, a metallurgist, an engraver, a designer and a laborer. He uses it for the hardest and rudest kinds of labor, as well as for the finest and most delicate. In short, this is not the most wonderful

application he has made of it. Man has transformed this agent of disorganization and death into a powerful remedy, which he introduces into the depths of the body, to modify and bring back life to organs that seemed determining to a speedy and inevitable death ; and particularly worth mentioning is the fact, that it is to act in the most delicate and the most sensitive elements of our organization that the doctor uses this electricity, which in past ages showed itself so rebellious and so terrible in its action. It is on the nervous fibre and cell that he prefers to use this fluid, and we all know the delicacy of the anatomical structure as well as the extreme physiological sensitiveness of these organic elements, on which impressions can be made, not only by the weakest of physiological agents, but even by absolutely immaterial causes, such as emotions, passions, etc. We thus have the right to say that electrotherapeutics constitute one of the most marvelous applications of practical electricity.

LAKE TAHOE AS A SUMMER HEALTH RESORT.

By C. B. Currier, M.D., San Francisco, Cal.

The surpassing loveliness and scenic grandeur of Lake Tahoe have afforded abundant food for inspiration to many a gifted pen and pencil. But its special claim to climatic consideration, although largely recognized and appreciated by the world living near its borders, is as yet an unknown quantity to that large world living east of the Sierras—to whom a knowledge of its charms, it may be, are partly known, in the vivid word portraitures of such writers as Starr King and Helen Hunt, whose facile pens have so amply and delightfully pictured their impressions of its ever-marvelous beauty —or to the exquisite pencil of the celebrated artist, Thos. Moran, who has caught the spirit and transferred to canvas one of Tahoe's glowing sunsets.

The question of health resorts is always an interesting one to physicians, in view of the fact that they are constantly being appealed to for suggestions and advice regarding suitable locations, and the benefits which may be reliably anticipated therefrom; and, therefore, I venture to present to the consideration of the readers of the Medical Times, an addition to the list of health resorts, which, in its summer aspect, is most admirably adapted to the requirements of a large class of patients, who, if not to be considered as invalids, except, perhaps, in the most comprehensive use of the term, yet from strong predisposition to inherited disease, or from overwork in professional or business life, may require the stimulus of new scenes, and the benefit of a remedial climate.

It is well understood by medical men, that there are many diseases in which ordinary therapeutic treatment is of little avail, compared with the particular requisites of climate and temperature. Incipient phthisis pulmonalis is one of the special conditions in which intelligent employment of climatic advantages is of more real value than all the remedies known to the pharmacopœia; and even when the disease has advanced so far as to warrant an inevitably fatal prognosis, the dread issue may often be delayed, and many a valuable life prolonged, by a timely and judicious change of climate.

Even cavities in the lungs, if they be not too large, are no absolute contra-indication to a change of climate, unless they be accompanied by other alarming symptoms, and the patient is too much reduced thereby to be able to benefit by out-of-door exercise, which, after all, is the important part of climatic treatment.

Latterly, too, there has grown to be an appreciation of the advantages to be gained from the healthy influence of high altitudes—cool and dry climates giving very generally more favorable results in all cases of defective vitality, than those that are warm and moist—and as coolness and dryness of atmosphere are increasingly found with increasing elevation above sea-level, these results may be claimed as arguments in favor of suitable elevations.

Atmospheric electricity, when due to elevation, is also a powerful curative factor in overcoming disease, its importance being far in advance of any positive knowledge that intelligent and studious investigation has as yet gained in regard to this subtle and potent force in nature.

Assuming that the higher the elevation, the cooler and purer, and more bracing and invigorating is the atmosphere, and that the sunlight is more intense on high mountain regions than on the lower plains, and defining the best climate to be always the one in which a delicate person can be out of doors with comfort and safety, for the greatest number of hours in the day and month, I would invite your attention to one of the many charming spots in the mountain regions of California, which affords all the foregoing elements of atmospheric and climatic perfection, combined with such scenic beauty and grandeur as shall inspire the soul to healthy aspirations, while the wearied body is being refreshed and strengthened.

High up in the heart of the Sierra Nevada mountains, lying partly in the northeastern part of California, and partly edging upon Nevada, is Lake Tahoe (Big Water), 6,202 feet above sea-level, and one of the loveliest bodies of water in the world.

It is twenty-five miles long by thirteen miles in its widest part, and is set in a frame of lofty snow-capped mountains, which tower above it 2,000 to 5,000 feet.

No other lake of its size, at home or abroad, can boast so high an altitude; and only Lakes Como and Maggiore, in Italy, can compare with it in depth, while for loveliness of situation and picturesque natural beauty, it stands alone and incomparable.

Its chief glory, however, is centered in itself; in its absolute purity (water taken from a short distance beyond the shore, having been analyzed by Prof. Le Conte, was found to be free from all admixture of foreign matter); its wonderful transparency, and its fascinating splendor of color.

Within a short distance of the shore, the depth being about 125 feet, the water has the pure green translucency of an emerald. Beyond 100 to 150 feet from shore, the bottom of the lake slopes rapidly, often to a depth of 1,600 feet, the color of the water changing with quick transition from its beautiful green translucency to a deep, dark ultramarine blue.

The transparency of the green water is something wonderful ; on a sunny, still morning, as you lie idly at rest in your boat, you may look down over its side and watch myriads of the shining lake trout skimming along their watery highway, and the bottom of the lake, which is, may be, 125 feet beneath you, can be as easily seen as the bottom of your boat. Another remarkable feature of Lake Tahoe's water is, that it never freezes, but even when the snow lies all about it to the depth of eight and ten feet in winter, it maintains a temperature of about nine degrees above freezing point.

There is no dew at morning or evening to keep even the invalids in-doors, while the atmosphere has the bracing and elastic qualities which always invite to out-of-door exercise, which exercise naturally promotes to a general distribution of vital force, which, in its turn, stimulates the different organs of the body and their functions, and lurking forms of disease, if not effectually destroyed, are at least often arrested in their growth, and one feels conscious of a renewed lease of life.

Trout-fishing is the principal business of the day to all who are piscatorially inclined, and for such there is no better fishing ground in all the world for trout; but when one has tired of this exciting sport, and when boating and climbing and exploring have all lost their absorbing interest, there is always the lake, with its fascination of ever-changing beauty, and the grand old

mountains, "sermons in stone," whose impressiveness grows upon you with every hour of your stay.

Sunrise and sunset have each their peculiar charms, and all day the loveliness of the overhanging sky is mirrowed on the bosom of the lake; but it is at night, when you have watched the stars, one by one, peep over the mountain rims, or when you have seen the lake dimple under the silvering process of the moon, that language fails to give adequate expression to your thoughts, and you become bankrupt in words, and the exquisite beauty of Tahoe is, after all, untold.

There are many attractive spots scattered about the shores of the lake, where good hotel accommodation may be had. Hot Springs, whose waters are noted for their efficacy in rheumatic conditions, Tallac, Rowland's and Glenbrook, have all comfortable hotels; but to any who may be tempted Tahoe-wards, would I especially commend the Grand Central Hotel at Tahoe City (the chief point of ingress and egress of the lake) as the most comfortable of hostelries, with the kindest of hosts.

And the way to get to Lake Tahoe from east of the Rocky Mountains, is by the Overland Railroad, five days from New York, which in these days of intelligent provision for the comfort of the traveling public, has made of a railroad journey a succession of pleasurable experiences, and the many points of interest *en route* make the journey a fitting introduction to the pleasure and benefit that await the traveler at the end of his pilgrimage by rail.

RHUS TOXICODENDRON; WHEN AND WHERE MOST RELIABLE.*

By S. W. Bowen, M.D., Fort Wayne, Ind.

It is considered as of value to a business man to have a friend that is responsible and ready to go on paper or help tide over the ebb, and meet bank accounts at maturity; and to a physician it is equally of value to know when and where confidence can be reposed in a medicine for the emergency. In the one case, there is character and credit, and in the other, reputation and perhaps life at stake.

It shall be my pleasure to endeavor to point out the time and place when a call can be made in the most perfect confidence for help from *rhus toxicodendron* and not be disappointed in our appeal.

First, and of all places where its best aid is most often exerted, are the results of congelation or frost bites. (The rapid extraction of caloric from the system at some point or place.) Here, if given internally, it will restore to perfect normality the part that has been impaired, if not entirely lost. It matters not how many long years of suffering have intervened since the occurrence, its beneficial effects will almost date from the inception of the first dose. All you have to do, is to tenaciously adhere to it, and a cure will be effected.

A case in point may not be out of place as illustrative of its action.

Mrs. S., aged thirty-five, had her feet badly frozen over twenty years ago, and has never been able to wear shoes in a winter since. Everything that money or affection could secure for her to mitigate her sufferings had been tried. She has suffered every winter since, until her life seemed to be almost a burden. Last fall I was appealed to for aid, and gave her three prescriptions of *rhus tox.*, and it did restore her to perfect health in less than two months. She has been the happiest woman I ever knew, for her feet have given her no trouble since.

Burns (the rapid introduction of caloric at same point or place) are almost as easily cured, and the ill effects of former burning can be repaired by the internal administration of *rhus tox.*; even if the dermal tissues are broken and the surface extensively ulcerated, the remedy will repair the injury and restore, leaving only the slightest trace of the results visible. In recent burns, an application of a dilution topically will prevent ulceration. In fact, no household should be without this invaluable remedy at hand, to apply at once in all cases of burns. For the bites of mosquitoes, stings of bees, and poisoning by spiders, there is nothing, except *ledum*, that can surpass it in its promptness and efficacy of action.

In erysipelas, it is rare that any other remedy is needed. This, and this alone, will cure permanently and effectually nearly all cases in from seven to nine days, *provided* that no external applications have been used—and certainly none are needed. Give it internally, frequently and persistently, and no uneasiness need be felt or feared, for it will generally prove to be master of the situation.

It should matter not what Mrs.——says about the application of *cranberries, iodine, nitrate of silver*, or anything else; you should not consent to anything of the kind.

In hives—and it makes no difference what prefix they may have (of bold or timid)—simply give this remedy, and continue it for at least a week after your patient is apparently well.

Rheumatism is not always cured by *rhus tox.*, but if it is below the belt, in the lower extremities, it will generally be the best remedy that can be given. It need not make any difference what, when, or where the pains are, if you are morally certain it is rheumatic, and in that part of the anatomy, it will remove them, and restore the vigor of youth even to an old man.

It will act best, quickest, and its effects be longer lasting if given in a low alternation, especially in Indiana, where malaria is a constant factor in facilitating the production of rheumatism.

Typhoidal conditions require some capacity for their comprehension and recognition; this the members of this Institute are supposed to possess. Where this state of affairs are found to exist, this remedy will be needed, and should be administered regardless of any peculiarity of pains, or time of accession of fever. These are minor points that I have found best to ignore. Sometimes a little aid from *bryonia* may be needed, and your patient can be on his feet by the tenth day, *provided* that no alcoholic liquors have been allowed, and your patient has been sustained by good coffee as the staple article of diet.

Not alone is the *rhus tox.* applicable in the treatment of typhoid fevers, but *it will prevent others* in the same house or room from contracting it. It matters little what the sanitary condition of the place may be, it will prevent the spread of the disease. The only condition to impose, is, to let fruit alone—eat none of it. Having treated many cases of this dreaded disease, oftentimes without seeing the patient, never having lost a case, or had it extend, and been able to guard many against it, I have come to the conclusion it is a simple affair, if properly managed, as it can be by judicious use of *rhus tox.* as the main remedy.

* Read before the Indiana Institute, May, 1883.

Chloral Hydrate in Lethargic Somnolency.—"Those who have watched old chloral-eaters (says Dr. J. C. Burnett, *Hom. World*, Feb., 1883) may have noticed that they slowly get lethargic, somnolent and listless. Toward the end of the chapter of chronic chloralism there is a condition of fatty degeneration of a slow, lazy type, and the very mode of death seems peculiar. I have seen a case where the subject of chronic chloralism lay for days a-dying; she was for several days so that it was very difficult to determine whether she was dead or not."

"Occasionally one comes across a remarkable case of somnolency, and then the narcotics are to be thought of by the therapeutist."

Dr. B. relates two such cases from his own practice, both cured by chloral in a low dilution.

CLINIQUE.

NON-SPECIFIC ENTERIC FEVER.*

By E. P. Fowler M.D., New York.

In the last three or four months of the year just ended (1881), the Vital Statistics of New York City report a comparatively large number of cases of typhoid fever, and it was said by the daily press that the disease had assumed epidemic proportion.

As a result of careful and somewhat extended inquiry, I am, however, inclined to the belief that the amount of specific enteric fever was over-estimated, and that this over-estimation arose from the concurrence of a non-specific form of enteric fever. The purpose of this communication is to briefly call attention to some characteristically distinctive features of what appears to me to be non-specific enteric fever, as illustrated by some cases herewith reported.

I will first present a clinical description of eight cases which fell under my care, and by way of contrast, I will also add one clinical record of a case of specific enteric fever, which was under my professional charge during the same period.

Case I. J. I. was a married woman, aged 39. She was attacked, October 30, with rigors and vomiting—morning temperature, 99; evening, 102^4; pulse, 90–96. This general phase lasted for two days. On the third day there were two brown passages, no vomiting, a little yellowing of the skin and conjunctiva. The next four days there were four, seven, eight and twelve brown, jelly-like passages. On the seventh day of the disease there occurred several sinking spells, with cold, moist, dusky skin. In this day (7th), the temperature had oscillated from 101 to 104^2, but the pulse had varied between 96 and 71.

On this seventh day the pulse fell to 62; on the eighth day there were no passages, but there was a return of nausea. Temperature, 100 to 101^6; pulse, 58.

On the ninth day there were two passages, both accompanied with some bright-red blood. Temperature, 103; pulse, 54.

On the tenth day there were four passages—lumpy and jelly-like. Temperature, 104^5; pulse. 57.

On the eleventh day there were two bright-blood passages. Temperature, 104 A.M., 102^1 P.M.; pulse 55–58.

On the twelfth day, no passage. Temperature, 102; pulse, 68.

On the thirteenth day, one passage; more normal. Temperature, 103; pulse, 68.

On the next day (14th) there was a natural passage. Morning temperature, 103; evening, 100^2; pulse, 68–78.

The malady here broke, and on the next day the temperature was $99–98\frac{2}{10}$; pulse, 74–78.

In this case there was no tenderness or distension of the abdomen, no dry tongue, no eruption, no nose-bleed, no enlargement of the spleen, and no tendency to mental obscurity.

The water was scanty, but not albuminous.

On the seventh day the right eye turned upward and inward, and objects appeared double to the patient. On the next day this feature had vanished.

The convalescence was rather slow, but there was no relapse.

Case II. E. T., female, aged 22. This young girl was taken ill on November 22, upon which day there were seven copious, brown, watery evacuations from the bowels. Temperature, 100–101; pulse, in the morning, 102; evening, 100.

The second day there were four lighter-colored passages. Temperature and pulse about the same.

The third day there were eight small, pasty and very dark passages; no special change in temperature and pulse.

On the fourth day there were no passages. Temperature $102–103^2$; pulse, 102–106.

Fifth day there were eight watery passages mixed with some light-colored blood. The entire abdomen was tender, but was not distended; nor was it especially sensitive along one spot.

On the sixth day four fluid passages, darker, and with still some bright blood. The tenderness became more restricted to the region of descending colon. Temperature, morning, 99^4; evening, 102; pulse, 94–98.

Seventh day, three passages, more consistent, and no blood. Side still tender. Temperature, 100; pulse, 90.

Eighth day, two slight evacuations. Pulse and temperature about the same.

On the ninth day, four evacuations more solid and tinged with blood. Temperature, 99–102; pulse, 88–98.

Tenth and eleventh days, no passages. Temperature $100–103\frac{4}{10}$.

Twelfth day, four small passages, all natural consistency. Temperature, $99^4–100\frac{2}{10}$; pulse, 78–102.

Thirteenth day, two natural passages. Temperature, $99^2–103$; pulse 70–78.

Fourteenth day, one natural passage. Temperature, fell to 98; pulse, to 60. Recovery was a little slow, and for two weeks there remained great tenderness in the region of the descending colon. There was an annoying facial neuralgia, and for some time the urine was very scanty, and at various times it contained a small percentage of albumen.

The remedy which seemed of greatest service in promoting convalescence was *sulphate of iron*.

Case III. H. D., female, aged 5. The child fell ill upon Sunday, Oct. 30. Had no chill, but much nausea and vomiting. Temperature, 102 to 105; pulse, 120. Second day same.

Third to eighth days, inclusive, there was no nausea, but there were twenty-nine evacuations—on the respective days, 6, 6, 5, 3, 2, 7. There was little change in the temperature, pulse ranged from 98 to 112. For two days the passages were dark, the next day light, the next light and frothy; on the seventh they were jelly-like and mixed with blood. The last or eighth day they were seven frothy and very offensive passages, putrid-like in odor.

On the ninth and tenth days there were no movements; on the eleventh, three semi-fluid ones; on the twelfth and thirteenth, none.

On the thirteenth day the fever ended in a profuse perspiration and quiet sleep, with temperature of 98 to $98\frac{1}{2}$; pulse 70.

The next day there occurred a natural passage, and the recovery was very rapid, and with no drawback, excepting one night of severe earache.

By referring to diagram No. 3 of the chart which is presented with this paper, it will be seen that the temperature in this case ranged chiefly between 102 and 103, and that the morning temperature rather exceeded the evening.

The symptoms here were also confined to nausea and vomiting, diarrhœas with some blood. There was no tenderness or meteorismus, no eruption, or any of the other features of specific enteric fever.

Case IV. L. H., male, aged 3 years. This three-year-old boy, who had always been feeble, was attacked, on Nov. 14, with, the nurse said, a "dozen watery passages." Temperature, 103; pulse, 112.

The second day there were six or eight bloody passages—pulse and temperature same.

On the third day there were four bloody passages; no tenesmus.

On the fourth day there were four very dark passages, offensive in odor. Temperature and pulse nearly same.

Fifth day, four mucous evacuations. Temperature, 102; pulse, 106.

* Read before N. Y. Med. Chirurg. Soc., March 14, 1882.

XUM

Sixth day, no passage. Temperature, 104 to $104\frac{2}{10}$; pulse, 120 to 130.

Seventh day, eight very offensive dark, fluid movements. Temperature, 103; pulse, 102.

Eighth day, two passages, nearly natural. Temperature, 99^4 to 102^2; pulse, 90 to 98.

Ninth day, no passage. Temperature and pulse nearly same as day before.

From this date recovery advanced very satisfactorily.

Through the entire illness the mouth, eyes and ears were very sore, the glands of the neck more or less swollen, and the urine, whenever it could be obtained, was found to contain considerable albumen; this disappeared about two weeks after the fever left.

The case presented no prominent features other than those described.

Case V. C. L. W.; female, aged 35. Suddenly, on Nov. 6, there occurred nausea, vomiting, chill and fever; passages completely intermixed with blood. Temperature, 103; pulse, 80.

Second day, temperature a little lower, pulse a little higher, and five jelly-like, reddish passages; no tenesmus, but pain and tenderness over the entire left side of the abdomen.

On the third day there were eight very fluid and extremely offensive movements, and on the fourth day there were three, all of them more consistent in character. Temperature and pulse not greatly varying.

On the fifth, no passages. Temperature, 101; pulse, 80.

On the sixth, three somewhat formed evacuations. Temperature, 102 to 103.

On the seventh and eighth, no passages. Temperature, 100 to 102. On the ninth day there were two natural movements.

The temperature and pulse lowered, and on the eleventh day stood at 99 and 70. The recovery was slow, and interrupted by frequent inclination to diarrhœa.

The cure seemed to be finally completed by a tea made of the *berberis vulgaris*.

Case VI. M. M.; female, aged 30. A chill of about two hours' duration occurred on Oct. 4, and for the eight succeeding days the temperature ranged from $101\frac{5}{10}$ to $104\frac{8}{10}$; there was only one day in which it did not rise above 104, and there was only one day (after the first) when it fell below 102. During this time there were thirty-eight alvine passages, mostly of a light green color, and with very little odor. The number of passages upon the respective days were 3, 2, 2, 8, 9, 4, 7 and 5. There was at the same time unremitting tenderness along the entire site of the descending colon, none along the region of the transverse or ascending colon. There was rarely nausea, no dry tongue; the skin disposed to moisture. There was no epistaxis, no distension of abdomen, no eruption, no wandering or dullness of mind. The spleen was not enlarged.

On the ninth day there was a consistent, quite natural evacuation. Temperature, 101 to 102^4.

Tenth, no movement. Temperature, 102^2 to $103\frac{5}{10}$.

On the eleventh there were three natural, though unformed, evacuations. Temperature, 103 and 102^2.

On the twelfth day the fever broke and convalescence proceeded uninterruptedly.

Notwithstanding the high temperature, the pulse never rose above 110 (on the 7th day), and much of the time it varied from 80 to 90. Twenty days after the arrest of the fever, the patient had recovered the usual routine of life though full strength was not really regained before the end of three months.

Case VII. L. B., male, aged 18. Was the son of one of our fellows, who is present, and who may perhaps be able to give a fuller description of the case than I have presented here, together with his impression respecting the nature of the malady.

A short time before his illness the patient had been exposed, and had taken a severe cold at the burning of the college buildings where he was a student.

On Nov. 13 he had a chill; I first saw him five days after the chill, when his temperature was 103^2 A. M., 104^2 P. M.; pulse 93-103.

On the next, 6th day, temperature and pulse about same; had vomiting and two movements of the bowels.

On the 7th day had three light colored, soft evacuations; temperature A. M. 103, P. M. 101^6; pulse 82-85.

On the 8th and 9th there were 7 and 6 passages of same nature as the last mentioned; temperature 102 to 104; pulse 82 to 92.

On the 10th and 11th there were 8 and 5 greenish passages; temperature and pulse about same.

On 12th day, 3 passages, more consistent; pulse same; temperature, 100^2 to $102\frac{1}{10}$.

On 13th two very natural movements; temperature, 99-102; pulse 80.

On 14th one entirely natural passage; temperature and pulse same.

On 15th day, two quite natural evacuations; temperature 98; pulse 84.

After this date the temperature never rose above 101, and the case gradually convalesced, although the recovery is not yet complete.

The convalescence was retarded by the advent of a most severe neuralgia of a peculiar form. At first it seemed like a kind of cutaneous hyperæsthesia. It was paroxysmal, occuring by preference at night, was mostly in the left leg and more below the knee. At commencement, light pressure was more distressing than a firm grasp. The patient could obtain very little sleep, and was almost beside himself with suffering.

There finally, after a day or two, came a little swelling along the surface of the tibia, which suggested the question of periostitis.

Various medicines were employed, and among others, *iodide of potassium*, but with no marked improvement. Upon the advice of Dr. John C. Minor, who was called in council, the *iodide of potass.* was again given in very generous doses and the trouble speedily became less. The father of the young man can inform you of his recent and present condition.

In this instance, there was no nose-bleed, no enlarged spleen, no ileocæcal tenderness or abdominal distension, no delirium, no brown tongue, no eruption.

There was some tenderness over the entire abdomen, but not marked.

Case VIII. L. D., female, aged 5. This little girl was taken ill on Oct. 28th with a chill, sore throat and vomiting; a dull, stupid condition of mind; temperature 104^2 A. M., 105 P. M.; pulse 120-123; and there were two watery evacuations from the bowels. The condition presented the outlook of impending scarlet fever, which, however, it did not prove to be. During the first six days the evacutions per day varied from 2 to 10 (35 in all). They were dark brown, offensive and copious. There was no vomiting after the first day. The region of the transverse and descending colon was tender, and there was some tenesmus. During these six days the temperature ranged from 103 to 105, more generally in the neighborhood of 104, and there was high pulse.

On the seventh day there was no movement of the bowels; temperature, 103; pulse, 90.

On the eighth day there occurred four very dark passages, almost black; temperature rose to $104\text{-}105^2$; pulse, 100 to 106.

During the ninth, tenth and eleventh days there were no passages, but there was a good deal of distress in the descending colon, and temperature varied from 102 to 104^2.

On the twelfth day there were two very dark, offensive movements; temperature 104.

On the thirteenth, no passages; temperature 101-103; pulse 80-90.

On the fourteenth day there came a natural movement of the bowels; at noon temperature, fell to 99^4; pulse 90.

From this date the child rapidly recovered.

After the second day of the disease the pulse had a general range of from 80 to 100; on some occasions rose as high as 108-10-12.

During the first few days the urine was scanty and albuminous. After this frequent examinations were made, but they discovered nothing far out of the way. With this patient the tongue was dry, but red rather than dark, not the redness, however, belonging to scarlet fever. The sleep was accompanied by a good deal of muscular twitching.

There was no eruption, swelling of spleen, meteorismus, nose-bleed, nor was there any real delirium.

Case IX. Case of specific enteric fever. D. S. G., male, aged 23. During the period in which the preceding cases came under my care, I had met no instance of that which I should be inclined to call true, specific enteric fever. This young man was taken, on Nov. 29, with a fine red eruption over the entire body, and accompanied by a temperature of $103\frac{8}{10}$. The eruption remained three days; the temperature, meanwhile, increasing each day with the characteristic stair-like manner of enteric fever. Distension of the abdomen commenced on the second; enlargement of the spleen was distinct on the fourth day.

On the seventh day the temperature rose to $104\frac{8}{10}$; and on the eighth day there occurred several hemorrhages of the nose, ten dark movements of the bowels and a full crop of red eruptive spots on the abdomen.

On the ninth day there was still profuse epistaxis and severe diarrhœa.

On the tenth day temperature rose to 105, the passages were bloody, the eruption very full, the mind very wandering, pulse from 110 to 120, and complete ptosis of left eyelid. The appearance of the case was in every respect that usually encountered in cases of very grave enteric fevers.

On the eleventh, twelfth and thirteenth days the condition became progressively more extreme, and on the thirteenth, the patient died—the temperature at $103\frac{2}{10}$; pulse 124–130—of cardiac paralysis.

It will be observed that this case differs from all the others in regard to nasal hemorrhage, enlargement of spleen, meteorismus, eruption, mental disturbance; and he, moreover, had the characteristic tenderness and gurgle at the ileocæcal junction.

This communication is not offered as anything definitive, but more in the way of a suggestion, through which to call forth other and more accurate observations, with the view of determining whether there is not common among us a disease which is not distinctly recognized, and which holds a relation to enteric fever somewhat analogous to that that which roseola, for example, does to scarlet fever, or chicken-pox to varioloid

At the present day I believe it is generally admitted that there have been differentiated from the conditions formerly known as typhus fever. three distinct maladies, produced by three distinct, different, specific kinds of poisons; each poison reproducing its own kind and never anything else, and the disease never arising from any other cause than the specific poison. These, as you know, are, typhus fever, enteric fever and relapsing fever.

For the purpose only of soliciting your closer attention to the contrast between the three diseases mentioned and the malady represented by my eight cases, I will ask your permission to recall some outlines which are familiar to each one of us:

Typhus fever usually ends in convalescence or death between the tenth and seventeenth days.

It is comparatively rare that there is not a tolerably full eruption over the abdomen and chest, sometimes over the entire body.

It is exceedingly contagious by touch and through the medium of the air.

Enteric fever is a disease more commonly of from three to four weeks' duration (in case of recovery). Compared with typhus there is slight eruption, and this is generally confined to the abdomen. There are epistaxis, meteorism, a peculiar green diarrhœa, the discharge separating into an upper and a lower layer, and also, in many cases, a mixture of bright blood, and blood rendered black and tarry-like, from changes in its transit along the track between Peyer's glands and its final escape. The temperature is quite characteristic:

The first week there is a steady increase; lower in the morning, higher in the evening; but the day entire being a rise over the preceding one.

The second week the thermal line takes a more continuous, horizontal direction.

The third week the exacerbation may equal those of the second, but the falls are greater.

The fourth week there are about the same kind of elevations and depressions, but the elevations are less and the depressions greater, so that the thermal line takes a continuously downward course.

As concerns age, there is double liability between the ages of 20 and 30 years.

The relapsing fever completes its course in about seven or eight days, a week or so intervenes and another paroxysm occurs, etc. The onsets of typhus and enteric fevers are slow, but that of relapsing fever is sudden and severe; indeed, it is characterized by this suddenness and severity, the marked enlargement and tenderness of the spleen and liver and by muscular pains; the distress being present whether the patient is quiet or in motion.

Herpes facialis form a part of the picture, which is not the case in either of the other mentioned fevers.

In addition to these, Liebermeister and Jürgerson have described that which they denominate "*abortive typhoid*," but these cases, some 200 in number, differ essentially from the cases I have herewith reported.

In Liebermeister's 100 cases there was enlarged spleen in 71, diarrhœa in 41, eruption in 21.

In Jürgerson's 87 cases there was eruption in 46 (75 per cent.), diarrhœa in 16 per cent. and *ileocæcal tenderness in every case.*

Niemeyer is quite sure, and Wunderlich thinks it highly probable, that there is a gastric and mucous fever, essentially different from specific enteric fevers, though very similar in aspect and even in anatomical relations.

By a tabular statement which I have inserted just at this point, it may be seen that the main feature of the eight cases consists of vomiting, diarrhœa, bloody diar-

AGE.	No. of cases.	Sex.		Vomiting.	DIARRHŒA.			Duration of disease.
					No. of days.	No. of passages.	Bloody passages.	
37.....	1	....	female	1st and 2d days	8	41	9th and 11th days.	14
22.....	2	....	female	.....	8	40	5th, 6th and 9th days.	11
7.....	3	....	female	1st and 2d days	7	36	7th day.	11
3.....	4	male	.....	.....	6	38	2d and 3d days.	10
35.....	5	....	female	1st day	5	23	1st and 3d days.	10
30	6	....	female	2d day	8	40	.....	12
18	7	male	....	1st and 2d days	8	36	.....	15
5.....	8	....	female	1st and 2d days	8	41	.....	14
		2	6					

rhœa (in five of them), high temperature, low pulse and an illness of from 10 to 15 days.

The entire number of evacuations averaged about 38 per case, the period of diarrhœa about eight days, the bloody diarrhœa about two days, being distributed, in time, between the first and eleventh days; generally after the fifth day.

In no case was the ascending colon tender; in four cases there was marked tenderness of the descending colon.

Four of the subjects were below 18 years of age, three below seven, one 22, three in their thirties.

There were six females and two males.

It may be noted that not a single case presented epistaxis, eruption, enlargement of spleen, ileocœcal tenderness, mental disturbance, muscular pain, evacuation separating into layers, and the disease did not in any instance communicate itself to others.

There existed lesions which gave bright red blood and dark, decomposed blood in the passages.

This kind of cases has given me much interest, and I hope that my description will not prove a waste of your time.

A CONTRIBUTION TO THE TREATMENT OF INTRA-UTERINE INFLAMMATION AND PASSIVE HEMORRHAGES WITH EXTRACT OF HEMLOCK.

By David Wark, M.D., New York.

The advances attained during the last few years in gynecological therapeutics have been of a very encouraging character, and give promise of still greater triumphs in the near future. We have much pleasure in bringing to the notice of the profession a remedy by which curative results of an unusually brilliant character can be obtained in cases of uterine disease that have hitherto been intractable.

In order to render apparent why such notable results attend the use of measures here advocated, a sketch of the anatomical structure of the mucous membrane investing the uterine interior will be necessary. Except at the orifices of the Fallopian tubes and the os internum, the mucous lining of the uterus is very much the thickest membrane of its class in the body. It is composed mainly of tubular glands, that, opening on its free surface, extend through its whole thickness, ending in a *cul-de-sac* at the underlying muscular tissue, to which the mucous membrane is firmly attached. It is therefore essentially a glandular structure, and is moreover very vascular, becoming specially so at the approach of, during, and for a few days after, the menstrual periods. It is obvious that when such a membrane becomes inflamed, its density, volume and vascularity present obstacles to its cure of a very grave character. The recorded results of treatment obtained by the means hitherto employed even by the ablest specialists amply corroborate this statement. Professor Thomas writes concerning the disease named by him "chronic corporeal endo-metritis": "Even if the case be not of a very serious character and has lasted only a short time, the possibility of rapid recovery is doubtful, while if it has continued a number of years it will often prove incurable." Professor Scanzoni, in speaking of the same disease, says: "As for ourselves, we do not remember a single case where we have been able to cure an abundant uterine leucorrhœa of several years' standing."

The use of the corrosive chemicals employed by these eminent specialists in cases of intra-uterine inflammation is candidly admitted by them to be a failure. We feel justified in going further and stating that such treatment is usually productive of grave injury to the patient.

She is always conscious of an aggravation of her sufferings directly after the use of the remedies in question. The influence of a caustic applied to the mucous membrane lining the uterine cavity is expended on the surface only; the deeper parts of the inflamed tissue are never reached by the curative influence of the remedy; the effects on the latter are indirectly but powerfully unfavorable. The discharge that oozes from the surface of the diseased tissue is nature's way to keep the inflammatory process in check; but when the mouths of the glandular follicles are suddenly sealed up by the corrosive action of the remedies now commonly used, the discharge is denied exit until the slough separates; during this time it necessarily accumulates in the follicles, distending them and causing the painful tumefaction of the uterine mucous membrane, of which every patient is so conscious directly after having submitted to such treatment. As soon as the slough separates, the mouths of the follicles become free, the imprisoned discharge escapes from the deeper parts of the diseased membrane, the latter recovers measurably from the injury inflicted by the treatment, and the patient's sufferings are mitigated until the next application.

We think it may be accepted as a self-evident truth, that no remedies can be curative in the diseases under consideration which expend their power on the surface of the morbid membrane, while the deeper tissues are indirectly injured. Curative results can be attained only by the action of a remedy that favorably influences both the surface of the inflamed membrane and the deeper parts at the same time, by coming into intimate contact with the whole interior of the inflamed uterine follicles.

The *extract of hemlock* prepared by the Geddes Manufacturing Company, of Boston, Mass., fulfils the necessary conditions admirably. When placed in the interior of a diseased uterus it saturates the inflamed membrane by filling every follicle, and thus exerts its healing influence on every part. It is not only an astringent of unusual power, but in addition it seems to possess a peculiar tonic influence on the tissue whose treatment we are discussing; for this reason we believe it to be specially adapted to the succesful treatment of chronic endometritis in which caustic applications have so frequently proved destructive.

We strongly recommend it to the confidence of gynecologists whose experience corroborates these views. Its application is nearly or quite painless, an advantage always highly appreciated by the patient.

The extract may be applied in full strength to the uterine cavity by means of a probe, the end of which has been wound with absorbent cotton, or a few drops may be safely deposited there with a Molesworth intra-uterine syringe, or it may be dried until it attains the consistence of a soft pill mass; this done, a bit of the remedy the size of a pea may be passed within the os internum on the end of a uterine probe; once in the cavity of the womb it soon dissolves and exerts its curative influence on every part of the diseased membrane.

Convincing proof of the efficacy of the treatment here advocated is afforded both to the physician and his patient by the improvement promptly experienced by the latter. The best results are secured by keeping the uterine mucous membrane under the influence of the remedy almost continually during a large part of the intermenstrual period. The applications should be repeated every second or third day.

In cases of inflammatory disease of the mucous membrane lining the cervix and in granular degeneration of the vaginal portion of the cervix itself, the use of the *extract of hemlock*, with such other local and general measures as will readily suggest themselves to every practical gynecologist, yields much better results than can be obtained by any other remedy with which we are aquainted. The following cases will indicate the effects that may be confidently expected from the use of this valuable preparation of *hemlock* in passive uterine hemorrhages:

Case I. A vigorous woman, 45 years of age, who frequently boasted that she had never required the services of a physician except at the birth of her children, began

to suffer from metrorrhagia as the menopause approached. We saw her on one of these occasions after the flow had continued copiously for about a week; at this time it had lost the appearance of menstrual fluid and assumed that of thin, red blood. As the patient began to be anæmic, we applied the tampon daily during the next three days; the hemorrhage was controlled as long as it was in position, but as soon as it was removed the blood quickly reappeared and did not cease until the inside of the uterus was swabbed out with the extract in full strength.

Case II. A lady aged 35 years, the mother of two children, began to suffer from profuse menstruation, which gradually increased month after month until it became a metrorrhagia so copious that her life was saved on several occasions only by the diligent use of the tampon. This resource practically failed, as the hemorrhage returned shortly after the tampon was removed. The bleeding was, however, controlled by the use of the extract applied in full strength freely to the bleeding surface. At the next menstrual period the normal discharge was again followed by copious hemorrhage. We then examined the inside of the uterus and discovered a small polypus, which we removed, with the result of obtaining a complete and lasting cure. This case forcibly illustrates the power of this *extract of hemlock* over passive uterine hemorrhages.

Case III. A married lady 26 years of age called me to attend her during a threatened abortion at the third month of pregnancy. She stated that this condition was brought about by herself, she having voluntarily taken some drug for that purpose. We found the loss of the ovum to be inevitable, and delivered her safely. The hemorrhage was not severe and ceased without the use of local measures, and she made a good recovery. Menstruation began in about forty days, but instead of ceasing at the usual time it became a copious hemorrhage. We did not lose time by resorting to the tampon, but immediately applied this valuable astringent freely to the inside of the uterus, when the blood ceased to flow forthwith.

In many cases of uterine hemorrhage the advantages obtained by the use of this preparation over other remedies—the tampon included—are obvious. After the application of the latter, the hemorrhage always continues from the bleeding surfaces until the uterus is filled with blood, which, when it has coagulated, opposes further hemorrhage, if the blood does not unfortunately pass along the Fallopian tubes to the peritoneum. But when the loss of the vital fluid is checked by the use of the preparation here recommended, the blood ceases to flow immediately. The danger of producing a pelvic hematocele, and the annoyance to the patient of a tampon in the vagina, are both avoided, in addition to the lasting tonic influence of the treatment on the spongy mucous membrane.

NATRUM MUR. FOR PEDICULI CAPITIS.—R. S. Blake, M.R.C.S. (*Brit. Month. Hom. Review*, July, 1882), speaking of the effect of *nat. mur.* in eruptions of the scalp, says: Whereas formerly I was in the habit of using cleansing lotions or ointments capable of killing the lice and cleansing the hair of the ova, a plan I do not doubt still followed by many, I have not found this necessary in a single instance during the past twelve months or more, since employing the *nat mur.* internally. The lice appear to have an intense abhorrence of this drug or of the changes it produces in the scalp and hair, for they (in my experience) seem to disappear of themselves as soon as the system is brought under its influence. The improvement in the health either renders their presence no longer necessary or possible, and when the conditions essential to their vitality cease to be fulfilled, they also cease to exist. It must not be supposed that *nat. mur.* should remove lice in every case, nor unless the state of ill-health were suitable for this medicine.

CAFFEIN IN HEART DISEASE.—Professor Lepine, in a recent paper in the *Lyon Médical*, urges the use of *caffein* in the treatment of heart disease in the same class of cases in which *digitalis* is usually found valuable. He thinks that *caffein* possesses distinct advantages over *digitalis*, which he considers in detail.

He has been using *caffein* in these cases for four years, and has administered it to more than sixty patients. He gives from 50 centigrams (9.25 grains) to 1.50 gram (23 grains), and sometimes 2 grams (30 grains), or even 2.50 grams (38 grains). The smaller doses directed in the books he finds utterly inefficacious.

According to Professor L., there is a certain proportion of patients (about one out of twenty) in whom *caffein* produces insomnia and other nervous symptoms. This condition is an absolute contra-indication to the use of the drug.

ALCOHOL IN DIPHTHERIA.— * * * Of course we cannot expect unvarying success with any remedy in any disease, but aside from any theory of the pathology of diphtheria, we know that *alcohol* is a potent destroyer of bacterial life, and prevents the hatching process of micrococci in the blood. * * * —*W. E. Wysham, in Med. Chronicle.*

PERMANGANATE OF POTASH IN GONNORRHEA.—Prof. Zeissl, of Vienna, affirms that strong solutions of *permanganate of potash* used as injections in gonnorrhea, produce stricture, that he has observed several such cases in the Vienna Hospital. He says that it cannot be denied that good effects are obtained from it, but that a weak solution possesses a sufficient astringency to produce the desired effect, as he has proved in many cases. He uses the following solution:

℞. Potass. permanganate.....	gr. 1-6.
Aqua.....oz. 11	M.

THE following mixture is recommended for inhalation in diphtheria and in angina membranacea:

Sp. vini rectif.....	120 0
Chloroform..... ..	15 0
Acid salycil..... ..	10.0
Ol. Lanea pini.....	3.0

M. Sig.—Inhale as required for relief.

TREATMENT OF ECZEMA.—At the conclusion of a paper on this subject in the *Birmingham Med. Review* for May, R. M. Simon, M.D., expresses in brief his views of the disease and its treatment as follows:

1. Eczema is a catarrh of the skin. 2. Its local manifestations may be erythema, a papule, pustule or vesicle. 3. It may commence acutely and tend then to spontaneous recovery or chronicity. 4. When chronic, not only are vesicles, etc., formed, but exudation takes place into the true skin. 5. Such exudation must be removed, which must be by absorption by the medium of the blood vessels. 6. Hard water must be always avoided in treatment. 7. In all acute conditions lotions do good, ointments do harm. 8. Air should be excluded. 9. Water used but little. 10. Crusts must be removed.

INJECTIONS OF HOT WATER IN DYSENTERY.—Dr. John G. Earish gives in the *College and Clinical Record* the history of three cases of dysentery, in all of which copious injections of hot water resulted in almost instantaneous amelioration of all the distressing symptoms and a speedy cure.

ALCOHOL IN DIPHTHERIA.—Dr. E. F. Storke, U. S. Med. Investigator, advocates the use of alcohol and water in equal parts, for a gargle and spray only. The alcohol, as contained in brandy and whiskey, he uses internally, as freely as circumstances will permit. He cannot see that the alcohol makes much progress in dissolving the membrane, but the general course of the disease is modified by these agents.

XUM

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"*A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and* OUGHT *to be the* ONLY ACKNOWLEDGED RIGHT *of an individual to the exercise and honors of his profession.*"—Code of Medical Ethics, Amer. Med. Ass., Art. iv., Sec. 1.

Our practice is *not* "based on an exclusive dogma, to the *rejection* of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry."

IN CERTIS UNITAS, IN DUBIIS LIBERTAS, IN OMNIBUS CHARITAS.

We can find no more appropriate heading to the subject we propose to discuss than the motto which for more than forty years has stood upon the title page of one of the oldest and most talented quarterlies of the new school. The word unity has a broader and more comprehensive meaning than it generally receives. We speak of an army, with its thousands of men, its battalions and divisions, as one, and we speak of the soldier as one; but the former is the oneness of unity, and the latter the oneness of the unit.

There is no power in a unit; there is no possibility of the harmony of that which is but one in itself. When we speak of unity in a great profession, made up of men of different habits, of diverse manner of thought, we mean that unity which exists between things dissimilar and unlike, rather than that which exists between things similar or alike. We do not speak of the unity of a flock of sheep, for one is but a repetition of another; they are all alike; nor of the unity of the separate atoms in a sand pit, for that is simply an aggregation of similar atoms, and even if hardened into a mass, they are not a unit, but a mass. If in our profession we look upon its duties from the same standpoint, all reasoning alike and seeing alike, there would be no unity, but the sand pit over again. Through the past two thousand years we have reached truth slowly; a fragment here and a fragment there; each century adding something, bringing out some new truth, and preparing the way for its further and more complete development. In every department of science the full truth is evolved, not all at once, but often through slow gradations, one fact preparing the way for another, one truth leading up to another, until the human mind is ready to seize hold of, nurture, and fight for, if necessary, truth vital to human progress, and which otherwise might have been crushed in its birth. The medical world for centuries has been divided into parties or sects, warring against each other. Each contending for some peculiar idea, and each working in a peculiar line of thought, seeing only one side of the shield. This in the past was inevitable, and was, to a certain extent, wise, for it brought out in stronger light each great truth, no longer the rough stone, but the polished gem; and as the violet, the blue and the orange make up the white ray, so these great truths in our profession, which have been developed through centuries of toil, are found not to be antagonistic to each other, but blended together in such unity as to make one great profession, a unit, like the human body, made up of different parts, each essential to the perfect and harmonious working of the whole.

These facts are now better understood, and each part of a great profession is beginning to appreciate the work accomplished by others, and realize that every honest mind, whose good opinion or friendship is worth having, is looking in the direction of one great central idea, by different processes, and through different paths, it may be, but looking to the same great end—the regeneration of the world from disease, and the emancipation of the human soul from its thralldom. The human mind is everywhere being emancipated from the thralldom of sect; it is reaching out for a larger liberty and a wider sphere of action. The banding together in distinct parties, and working in distinct lines, has served not only to bring out the real value of the principles for which each contended, but to free them from the rubbish with which speculative minds always strew the path of progress, and give them their legitimate place in the grand whole.

The important question comes up before the mind at the present time, if *pathy* has not performed its work in bringing out, establishing and showing the uses of the great principle for which each contended, and now that these principles are admitted by the leading minds of all schools, if it would not be wise to drop all sectarian names, and admitting the rights and liberty of all, proclaim the unity and brotherhood of a great profession? To this end the two great professions which have, more than any other, filled the world with their war of words and their persecution—the theological and the medical—are steadily advancing. Each party is seeing some good in the other, realizing that no one party holds all of truth, and in the spirit of light and progress are blending together in harmonous fellowship in the great war upon the common enemy.

We appeal to our brethren of the new school to change the sectarian flag under which they have fought so grand a battle for a great principle—for that principle, the dual action of drugs, is now thoroughly established—and hoist the flag of a united profession whose folds are broad enough to cover all. Let every man work in the way in which he can accomplish the most good, but let us turn our batteries

against a common enemy rather than upon ourselves. The days of sect in our profession are numbered; the spirit of the age calls for unity, not necessarily the similarity of the flock of sheep, or the atoms of the sand pit, for that would be impossible and not to be desired, but that unity which unites men upon a single platform and beneath one flag, whose opinions upon minor points differ, each preferring his separate work, but all, like the members of the human body, united in a harmonious whole.

The civil war which, during the early part of this generation, convulsed the nation, illustrates our point. For more than a generation a small party contended for the equal rights of all men, for certain principles of right and justice, without which they believed the nation could not long live and flourish. Met at first not only with sneers but persecutions, the time foretold at length arrived when the antagonistic principles stood, strong and defiant, face to face upon the battle field. Both sides had long been preparing for the struggle, one a unit in thought and action, the other, through the slow process of education, reaching a point where a conflict between the two principles in which the stronger must win was inevitable. Abolitionism, as a party, ceased; but the principles for which it contended, of equal rights to all, of a national unity, based upon right and justice, live in a strong and united nation. Homœopathy, as a sect, disappears, but the great principle for which it struggled, the dual action of drugs, lives as the centre, the spirit, of the rational therapeutics of the present and the future. The old school has always been sectarian in fact, and the new school, in nine-tenths of its members, only in name. Names may change, but principles remain. By clinging to a name which by no means represents its catholicity and its spirit the new school places itself in a false position. Thoroughly catholic in spirit, it proclaims itself to the world as sectarian, and with its own hand closes the door of many an avenue of public preferment, and gives its adversaries a weapon which has been wielded with terrible force against it, and which they could not obtain elsewhere. Even if the name represented truthfully the school, which it does not, the necessity for it no longer exists. The principles for which it contended are admitted by the foremost thinkers of the profession everywhere, and enter into the spirit of nearly all the modern investigations in therapeutics. It remains for the new school to decide for itself whether it will take its natural position in the front rank of that progress which it has done so much to create, or, clinging to a name, and thereby isolating itself, become bereft of honors and influence it has richly earned. The new school has placed before it life or death. If it clings to its old name, honored and loved as it is, but which by no means covers its belief and practice, it goes down as a sect to a speedy death. If, on the contrary, it catches the spirit of the times, that spirit of liberty and enlightened progress now breathing through and moulding a great profession into a brotherhood, a unity, which will live through time, it takes its proper position and wields its proper influence in the ranks of a science which it has done so much to create.

THE ETHICAL PROBLEM.

The question as to a Code of Ethics is occupying the attention of many leading medical men and much space in both medical and lay journals. Drs. Austin Flint, Sr., H. G. Piffard, E. R. Squibb, Fordyce Barker and others, have discussed the subject from their respective standpoints, and the profession is being thoroughly canvassed for the purpose of ascertaining the views of its members, with the result thus far, as we understand, of showing a growing majority in favor of no code at all. The *Evening Post* says:

"The point of Dr. Flint's paper is not that the existing New York code permits consultation with the followers of Hahnemann, but with practitioners of medicine who have adopted a trade-mark by calling themselves homœopaths, eclectics, steam doctors, Indian doctors, or what not. Apparently Dr. Flint would not hesitate to consult with a legally qualified physician, who calls himself simply M.D., whether he practices *similia similibus* or not; but if he calls himself homœopathic M.D., then Dr. Flint has the same objection to him that he has to doctors who advertise in the newspapers and who make and sell patent medicines. Dr. Flint contends, also, that there is nothing in the old code which should restrain any physician from 'yielding to the demands of humanity.' If this is true, it is hard to see what has caused all the trouble. What is contended for by the supporters of the new code is, broadly speaking, the right to employ their talents and experience when sought by the sick in any way they may deem most useful. If the old code does not forbid the exercise of the healing art by regulars in a case where the attending physician is a homœopath, what does it forbid? If the demands of humanity are to be listened to under the old code as well as under the new, is there anything left to dispute about except definitions and abstractions? What are the 'demands of humanity?' It is contended by the supporters of the old code that the New York Academy of Medicine is the only local organization now having access to the national organization, and hence that the question of ethics cannot be ruled out on the ground that the Academy is merely a scientific body.

"An unprejudiced reading of the proceedings of the meeting of April 19 will, we think, satisfy anybody that Dr. Barker is justified in denouncing the chicanery by which the meeting was packed in the interest of one party, and a final judgment obtained, without notice to the other party, on a question of so much moment, and also in tendering his resignation as President and as a member of the Academy. Surely no question of ethics can be more important to an honorable profession than that involved in the methods employed to take one side unawares and to obtain a triumph over them by the processes of a Tammany Hall primary. After Drs. Barker, Roosa, Agnew and Cushman had tendered their resignations, the majority evidently thought that they had gone too far. A resolution was passed suspending the by-laws and adjourning to meet on the first Thursday in October. As this was equivalent to a temporary suspension of the rule adopted in regard to new

admissions, the resignations were withdrawn, and the whole question goes over till next autumn."

The dropping of all sectarian titles, including the term "regular," would, in the present aspect of affairs, simplify matters much by removing the barrier which has caused the acrimonious division of the profession into sects.

We are quite aware that this procedure would be resisted by the various interests which could not continue to exist without a trade-mark, but many practitioners will be satisfied with the assurance that perfect freedom of opinion and action will be guaranteed, and will withdraw from sectarian fellowship altogether.

WARD'S ISLAND HOSPITAL.

A very pleasant reception was given to Dr. Williamson, the retiring Chief of Staff, and to Dr. Strong, who succeeds him, at the house of Dr. Guernsey, 526 Fifth avenue. Most of the Medical Board were present, and also Hon. W. H. Wickham, chief magistrate of the city at the time the hospital was organized; Dr. J. M. Carnochan, for twenty-one years Surgeon-in-Chief of the State Emigrant Hospital, Ward's Island, and Hon. H. H. Porter, President Board of Charities and Correction. The hospital has more than fulfilled the expectations of its friends, not only in the amount, but in the efficiency of the work done. The death-rate has been less than any of the other great charity hospitals of the city, and the cost of maintenance no more. The hospital is also a great clinical school to those who choose to avail themselves of its privileges, and shows in the comfort of the sick and the results obtained the vast superiority of the broader and more scientific treatment of the new school.

OVERCROWDING THE PROFESSION.

The *per capita* number of physicians to the population in this country is exciting considerable discussion both in and out of the profession, and it is high time that the subject should receive attention, when the public is already overwhelmed with medical practitioners, and vast numbers of physicians are jostling for an existence.

The fact seems to be established beyond doubt, that there are too many practitioners of medicine, particularly in this country, the ratio of which was stated in these columns some months since.

The first question which should be considered is, "What can be done to change it?"

We see no way but for the profession to take the matter in hand, and raise the grade of scholarship to such a point that a less number will attempt to enter our ranks, and these will be sure of higher attainments.

Skilled labor is the absolute demand in all mechanics as well as in the arts, and it can work no hardship to such as would join our profession, that they be compelled to serve a longer apprenticeship, and then we shall have less 'prentice-work under the cover of medical diplomas.

The best course, as we look at the matter, is for the medical societies to move in the direction of compelling the colleges to exact longer terms of study, or, what would be better, a State examination!

In a few days, the two great National Medical organizations of the country will meet in council, and no better time or place could be selected in which to start the ball, which shall eventually regulate so grave a problem as the one under discussion.

While we are aware that we have a committee on medical colleges which will, undoubtedly, do good work, and which will, probably, present some plan by which this object can be accomplished, nevertheless, it will be necessary to insist upon the adoption of a specific grade, which shall govern all the educational institutions, and provide the penalty for non-compliance with such requirements. In this movement, the immense influence of the college-teachers should not be antagonized, if possible, and perfect justice should be kept in view, but at the same time we should beware of the selfish and mercenary interests which will complicate the subject at every turn.

SECTARIAN RECOGNITION.

The attempt to obtain sectarian recognition in the army and navy has resulted in complete failure, and as, doubtless, another movement will soon be instigated in this direction, we take this opportunity of suggesting that it be made purely non-sectarian, and sufficiently broad for the great mass of thinking people to stand upon.

What we want and should have is absolute justice to all concerned.

While we do not condemn the plan recently presented as a whole, we think that a broader, more comprehensive and more concise presentment could be framed which would have a far greater chance of adoption.

All we need to ask for is the right of any graduate in medicine to become a candidate for examination for position in the army service, and as a guarantee that the competition may be fair, the questions and answers should be subject to the inspection of those in interest. With such a proposition, we could count upon the influence of a large majority, as we should not be handicapped with sectarianism.

As the other plan has miscarried, why not try this one?

DR. CHAS. H. MOORE.

The Medical Board of the Homœopathic Hospital, W. I., has adopted the following resolutions regarding the death of Dr. Charles H. Moore:

WHEREAS death has removed from this Board, Dr. Chas. H. Moore, an earnest and cultured physician; therefore,

Resolved, That we deplore his untimely end and recognize the great loss thereby sustained by this institution and by the medical profession in general.

Resolved, That we thus record our high appreciation of his manly nature, liberality of mind and his medical attainments.

Resolved, That in his education, devotion to medical charities, and his belief in scientific progress and truth, united to social and moral virtues, attractions of person and a pure life, he represented a high and desirable standard in the profession.

Resolved, That we extend our hearty sympathy to his family in their loss of a noble and promising son, who though young in years had already done for the poor and unfortunate sick more than many who have health and length of days.

Resolved, That these resolutions be entered in our records, and that a copy be sent to the family of our departed colleague, and published in the N. Y. MEDICAL TIMES, and in one or more lay journals.

TINCTURES OF FRESH HERBS.

The introduction of this class of preparations into the Pharmacopœia of 1880 has given them a position in medicine which at least entitles them to be thoroughly studied and examined; while the indefinite way in which they were placed on the list is in itself an admission of how little the largest class of practicing physicians know of their properties and uses.

Their therapeutic value is so variable, when compared with preparations of the same nature from dried plants, that it will be necessary to consider each separately. The use of one or the other in the so-called homœopathic dilutions would hardly be a standard of comparison for their strength, for the reason that the mother tincture is so much diluted that a difference of 50 or even 100 per cent. in the strength of the basis would not be appreciated in the dilution.

Their use in this manner, and their reputation as distinctly homœopathic drugs, have put them out of the reach of the general practitioner, who, until lately, has classified the drugs and preparations common to that school, together with the theory of their use, and dismissed both without looking into their possible value to his practice; and the arbitrary strength given in the various homœopathic pharmacopœias to their tinctures, is usually very misleading and wrong.

Looking through the books of Phillips and Ringer, which may be said to represent the best of modern and advanced therapeutic writings, we find tinctures prepared from the fresh plant mentioned in many instances, and in some cases favorably, when compared with officinal tinctures.

When it occurs to us that the first experience in medicine is generally from the green plants, from which the first preparation is made, and that the first impressions formed of the value of the plant in medicine are not always realized in the dried, it is more than possible that the reason often lies in the method of its exhibition rather than its ability to produce symptoms sought for.

The extracts and tinctures of drugs are expected to be the best solution of their medicinal principles in the liquid used to extract them. The best method to present them to the dissolving menstruum is such, first, that the greatest surface shall be acted upon, that the medicine may be the most readily and completely separated by it from the inert part of the material; and second, so that there will be as little change in the physical properties of the drug as possible, to present it in the right form.

The menstruum necessarily should be either the best liquid or the best combination of two or more liquids, to dissolve the active principles.

The drugs of the pharmacopœia, before the adoption of the new class, were all dried and made into a more or less fine powder. A study of whether this was the best manner of preparing them would divide the preparations into two classes—alcoholic and hydro-alcoholic—and would also bring up the exception to any arbitrary rule of division, that many natural solutions, either of vegetable or animal matter, are often rendered much less soluble when once dried and attempted to be dissolved again.

This is a very strong reason why a tincture should not be made from a fluid extract, a practice among druggists which cannot be too strongly condemned.

Another thing which will have to be allowed for in preparing the green plant solutions is the difference in amount of moisture in the plant when gathered. The plants contain a large percentage less moisture in the afternoon than in the morning, and the tincture would become proportionately stronger as made from plants cut later in the day.

Some of the plants from which the green tinctures are said to be as good, or better, in their action than those from the dried and powdered drugs, are:

Pulsatilla, hydrastis, actæa rac., hellebore, lobelia, ipecac, veratrum, digitalis, gelsemium, rhus, thuja, arnica, sanguinaria.

Strongly developed, perfect plants should be selected. They should be cut just above the root leaves, in the morning, shortly before or just on commencing to flower. Narcotics should be gathered when in full bloom. Roots should be divided into three classes: first, annuals, which are to be cut before the seed ripens; second, biennials, in the spring of the second year; and third, perennials, in the autumn. Care should be taken to separate them from any dirt or foreign matter, and that the preparation should be started immediately after gathering the drug.

Nature furnishes undoubtedly the best solvent for the active principles of any drug. They are the vital part of the plant. They are carried from the root to the stem, from the stem to the leaves and flower, and from the leaves back to the bark. They are found in larger quantities and most active in the living plant. They are found in every cell in perfect solution. The growth of the plant spreads toward the top; each cell in the plant is a perfectly independent department, furnished with a close coat, which surrounds and holds its own fluid. The food for the plant is contained in this cell. The development of the plant is carried on by a process called endosmose or dialysis, and dialysis would be impossible unless the solution is perfect and the matter in solution a crystalloid. Our fluid extracts and tinctures are never perfect solutions. They are precipitating and changing constantly.

Again, the cells of most plants are so small that it requires a microscope to distinguish them apart. The process of drying shrivels and contracts them into a much smaller compass. The vital principle is confined in the dried cells, which are covered with a hard, tough coat. The powder directed by the pharmacopœias is seldom finer than a number eighty—each one of these must comprise many of the cells, with the active principles, to a great extent, dried and changed from their natural state.

The tendency in medicine is to use the preparation which most thoroughly represents the plant when that is indicated. When the fresh plant is cut and pounded to a pulp, the natural juices or solutions are in the very best possible condition to be treated in the manner which shall furnish a product that will answer the requirements of perfect solution and stability.

We are confident that methods will be devised to make preparations from green roots and herbs, of such a uniform and standard stamp that they will prove a valuable aid to therapeutics, and an elegant addition to the list of pharmaceutical products, and that their action will be satisfactory to the physician who studies the effects of his medicines to use the smallest quantity to produce an effect without causing any more physiological disturbance than necessary.

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The third volume resumes the consideration of the injuries and diseases of the various tissues of the human body, containing separate articles on injuries and diseases of the muscles, tendons and fasciæ; on injuries and surgical diseases of the lymphatics; on injuries of the blood vessels; on surgical diseases of the vascular system; on aneurism; on injuries and diseases of the nerves, including tetanus, and on injuries of the joints. The different subjects are treated in an exhaustive manner by P. S. Conner, M.D., Edward Bellamy, M.D., John A. Liddell, A.M., M.D., John A. Wyeth, M.D., Richard Barwell, F.R.C.S., M. Nicase, M.D., and Edmund Andrews, M.D., LL.D. The present volume

fully sustains the high reputation acquired by its predecessors. The estimation in which the work is held abroad is evinced by the fact that translations are already announced in the French and Italian languages. The volume is enriched by a number of illustrations from the "Medical and Surgical History of the War of the Rebellion," and the text profusely illustrated by chromo-lithographs and wood-cuts.

WOOD'S LIBRARY OF STANDARD MEDICAL AUTHORS.

The sixth edition of Dr. Wm. B. Carpenter's work on the "Microscope and its Revelations," forms the April and May issues of this popular Library. The work is illustrated by a large number of plates and several hundred excellent wood engravings, and is one of the most useful practical works on the microscope and its revelations now before the public. The utility of the microscope is by no means limited to the determination of the structure and action of the organized beings now living on the earth, but is almost equally valuable to the botanist, the geologist, and in every department of the natural sciences. Dr. Carpenter is so well known to the scientific public for the accuracy of his statements and the clearness and beauty of his style that no commendation is needed of any work from his pen. These two volumes are alone worth more than the year's subscription to the Library.

The June number of the *North American Review* opens with an article by Joseph Nimmo, Jr., Chief of the Treasury Bureau of Statistics, on "American Manufacturing Interests;" an article by the Hon. Wm. M. Springer, on "Incidental Taxation," which is an argument for free trade. D. C. Gilman, President of Johns Hopkins University, writes of the "Present Aspects of College Training," as affected by the increase of wealth and luxury, the development of natural science, and the influence of a larger religious liberty. Edward Self presents some weighty considerations on the "Abuse of Citizenship." Prof. Isaac L. Rice criticizes some of "Herbert Spencer's Facts and Inferences" in social and political science, and Christine Nilsson contributes "A Few Words about Public Singing." Finally, there is a symposium on "The Moral Influence of the Drama," the participants being, on the one side, the Rev. Dr. J. M. Buckley, well known as an opponent of the stage, and on the other, John Gilbert, the actor, A. M. Palmer, theatrical manager, and William Winter, dramatic critic.

CORRESPONDENCE.

OUR LONDON LETTER.

MESSRS. EDITORS:—The London School of Homœopathy has ceased to exist as a separate institution. It having been felt that its operations might possibly have to be suspended, from lack of students, it was decided at the late annual meeting of the governors and subscribers of the school to amalgamate the latter with the London Homœopathic Hospital. In future the Board of the Hospital will take charge of the affairs of the school. The name of the school is changed, and is now "The London Homœopathic Hospital Medical School;" the name of the joint institutions—"The London Homœopathic Hospital and Medical School." By this measure permanence is secured to the school even should the lectures for any time be suspended.

Dr. Pope has resigned his position of Honorary Secretary, and also the lectureship on Materia Medica, which he has filled with such ability. Dr. Hughes lectures on "Materia Medica" during the summer season. It will then devolve on the supporters of the school to appoint Dr. Pope's successor, or to make what changes may be thought advisable in the methods of teaching. Students are getting well tired of lectures. It may be thought desirable to establish clinical lectureships in place of the systematic courses of lectures which have been delivered hitherto. Dr. Dyce Brown continues his course of lectures on "Medicines" during the summer. Dr. Tuckey has been appointed Honorary Secretary in place of Dr. Pope. Yours, fraternally,

JOHN H. CLARKE, M.D.

15 St. George's Terrace, Glo'ster Road, S. W. *May* 2, 1883.

OUR CHICAGO LETTER.

MESSRS. EDITORS:—The Chicago daily press, with characteristic enterprise, is not disposed to allow the row in the New York Medical Society to pass without making a "note on't." Not content with editorial comments by the *Tribune*, *Inter-Ocean* and *Journal*, poking fun at the illiberals, the *Chicago Times* has set to interviewing the prominent doctors of both schools, and in a recent issue published a column or more of opinions respecting the matter. Some of these "opinions" are calculated to make one laugh who knows the private sentiments and private practices of those from whom they emanate. For example, Prof. J. Adams Allen, President of Rush Medical College, who is well known to have been in the past one of the most bigoted opponents of the new school, says: "I do not know but that the movement to establish an unwritten Code will prevail in the end. I am an old fogy in these matters, and I can see no good to come from consulting with any school of doctors excepting the regulars. I suppose it will come, however. We have women doctors," he adds lugubriously, "and every new-fangled notion secures a foothold."

Further on he says: "The State Board of Health, by having a *conglomerate* organization, has done a great deal toward breaking down the medical profession here, (*sic*) *and I expect the abolition of the Code will finish the work.*" After such an admission, so reluctantly given, no wonder this antediluvian finishes his interview in a fit of hysterics and mutters: "I feel like Simeon; I have seen the salvation, and now I want them to let me depart in peace."

My dear old fogy, *requiescat in pace.*

Several of the interviews with other old school physicians were of similar import. The prevailing sentiment being that the old school stomach was considerably perturbed, because the old school eye had greatly magnified the size of the new school pill which must be swallowed at all hazards. *Per contra*, the new school doctors interviewed showed no particular alarm or disquietude. One of them very sensibly said: "I am willing to consult with an old school physician, if he is a gentleman. So far as we of the new school are concerned, we will give the movement our moral support." He thought the Code would be wiped out in fact in the near future, as it is ignored now by many able practitioners of both schools; and this is just to the point: The fact is ignored or lost sight of in all this controversy, that while the conservatives of both schools have been crooning, and moaning, and mourning over what *might* happen, the very thing they have feared has practically been accomplished under their very eyes and noses. I have before me a list of a dozen of the most prominent old school physicians in Chicago, including names of professors in all of the three old school colleges, who have repeatedly been in counsel with the despised of the old school, and sigh for more consultation of the same sort at the regular rates.

Our Commissioner of Health, Oscar C. DeWolff, has done much to break down the old-time prejudice by his broad-minded, liberal policy. During his entire administration of over four years' duration, he has ignored schools

entirely. Two years ago, when small-pox was so prevalent here, he wrote me a letter asking if I could recommend to him a good man, for the position of medical inspector. I did send him a good man and he paid him a good salary, and after he had served his time he wrote a letter thanking me for what I had done, and said that our Dr. Greenleaf had proved himself the best man in the whole corps of inspectors, which numbered some twenty or thirty. The Illinois State Board of Health has also done much toward breaking down the barriers of sectarianism, by holding to a thoroughly liberal policy, and showing no favoritism to any sect, school or college. The new school is ably represented in the board in the person of Prof. R. Ludlam, who has shown discretion, at least, in steering clear of antagonisms, and the board has been a thoroughly harmonious body, notwithstanding its "conglomorate" composition.

The secretary of the board has recently addressed a letter to each of the Chicago medical colleges, asking for co-operation in establishing a board of examiners for students seeking admission to these colleges, and debarring those from entering who are deemed unworthy by reason of insufficient preliminary education. This wise movement has received the sanction of the Chicago Medical Society (old school), which by resolution proposes to carry the reform a step further, by making this State Board of Examiners not only responsible for matriculants, but also for those to whom diplomas are awarded. In the discussion of this matter some startling statements were made. One speaker said that his "wife's dressmaker had become a full-fledged practitioner in one year;" and called attention to the fact that a certain college in this city graduated a class of fifty in five months, about which he had never heard a word said.

This remark was understood to refer to the new College of Physicians and Surgeons, which was established a year ago, as a rival to old Rush, which is within a stone's throw of its new and magnificent College building.

But the reprehensible practice of granting diplomas to single-course students is by no means confined to the College of Physicians and Surgeons. Unless rumor is greatly at fault, the elder of the two new school colleges here is very lax in this matter, and but for the fact that her president is on the State Board of Health, the truth or falsity of this rumor would have been determined long ago. It is not so risky to do a criminal act when you have got a friend at court, especially when that friend is a judge on the bench. The only way in the world to regulate the colleges and secure honest graduation of well-qualified students is the establishment of such a board of examiners as here contemplated, the members of which board shall be disconnected with the colleges, and have no personal interest whether the applicant for admission or graduation enters or receives his diploma or not. It is fervently to be hoped that this movement will prove successful.

If it is, the number of students in attendance at the different schools may be diminished; the number of "doctors" ground out every spring certainly will be, but the world at large will be the gainer, and the standard of medical education will be materially advanced.

Speaking of colleges, the youngest of any sort is the new Dental College, which, if its first announcement is any criterion for judgment, is worthy of all praise, and is a model for emulation.

Listen to this: "We believe the time has come when the practitioner of dental surgery should be a fully qualified medical man; that he should be on an equality with other medical specialists; consult with, and be consulted by the general practitioner to their mutual advantage, and the more intelligent treatment of the case in hand."

To this end the Dental College confers its degree of Doctor of Dental Surgery only "upon persons holding a degree in medicine from colleges recognized by the Illinois State Board of Health.

"Matriculants intending to take the degree of Doctor of Dental Surgery must hold a degree in medicine, or be pursuing studies to that end in some reputable medical college," etc.

I understand that the college starts off on its first year's course, *not* with large numbers, but with large hopes and high purposes, and with ample financial backing to make it a fixed and permanent success as a College of Dentistry. God speed it. But I started out to write something regarding the Chicago Medical Colleges in general, and especially the relation of women thereto. Both of these topics I must leave till next month, as I have already transcended my allotted limits.

OBSERVER.

CHICAGO, *May* 10, 1883.

POPE vs. WILSON.

MESSRS. EDITORS:—Dr. Pope, in the May number of the TIMES, claims to have formed a more correct estimate of "the literary ability, scientific capacity and the industry of his professional brethren" in this country than that recently proclaimed by Dr. Wilson in the *Medical Advance*. It would be pleasant to think that our transatlantic colleague's judgment on this point is well founded, but I fear that, if his criticisms of Allen's Encylopedia be considered in connection with certain facts mentioned by the Michigan professor, it will be impossible for even the most patriotic of our fraternity to assent to it. Dr. Wilson, in the communication referred to, informs us, on the best authority, that Dr. Allen is now and has been for four years, "engaged in preparing a revised and compact edition of the Materia Medica Pura, which he intends to make thoroughly accurate. He has been constantly employing experts," etc. That is —Messrs Boericke and Tafel, in their endeavors to effect some sort of a patching up of Dr. Allen's rather expensive *fiasco*, can do no better than keep Dr. A. himself at the task, although he has been proved so utterly incompetent that even his friend and co-laborer, Dr. Hughes, was obliged to relinquish the attempt to rectify his errors, and Dr. Pope, while sincerely hoping "that no unjust measure of depreciation may be dealt out to the Encyclopedia," nevertheless pronounces the work "worthless."

Of course, if this leading firm, whose arms stretch across the continent, could have found within its borders anyone whatever both qualified and willing to sift over and present in decent guise the vast mass of material heaped up by Dr. Allen, they would have secured that person's services without delay. Since they have not done so, it can only be inferred that no such gifted and self-sacrificing individual exists.

MASSAGE IN THE TREATMENT OF CATARRHAL LARYNGEAL CROUP AND DIPHTHERITIC ANGINA.—Bela Weiss' method has been found by the author to be recommended, and is as follows: The throat alone is to be manipulated by placing the three fingers on the larynx and moving gently at first, with greater force afterward, to the maxillary angle. The manipulation lasts from five to six minutes, and is repeated every two or three hours. The effect is noticed at once in the diminished pain on swallowing, and in cases in which the manipulations are instituted at the onset of the disease, violent diphtheritic symptoms rarely occur; if such symptoms are already present, they are at once alleviated.

After each manipulation diphtheritic mucous masses are expectorated, the hoarseness gives way, and euphonia generally begins.—E. Freund, *Deut. Med. Wochenschr., No.* 47, 1882.

ANÆSTHESIA OF THE PHARYNX.—M. Du Cazal remarks that *tincture of coca* is an excellent medicament to cause anæsthesia of the pharynx. This can be secured by simply painting the mucous membrane. This fact is of interest to all who use the laryngoscope.

TRANSLATIONS, GLEANINGS, ETC.

SLEEP WITHOUT NARCOTICS.*

By Selden H. Talcott, M.D., Ph.D., Middletown, New York.

* * * In considering the causes which tend to *prevent* sleep, we may note, *firstly*, those pathological conditions of the brain which tend to disturb or derange its normal action. Chief among these are cerebral hyperæmia, and the opposite, namely, excessive anæmia. While healthful sleep is due, we believe, to a moderate anæmia of the brain, a persistent and severe anæmia of that organ is one of the most striking causes of sleeplessness. The "happy medium" is the only condition in which to obtain certain and satisfactory sleep.

Secondly, protracted over-use of the brain—that is, overwork of that organ until the brain produces, or tends to produce, vaso-motor paralysis—disturbs or destroys all natural tendencies to sleep. * * *

Thirdly, over-anxiety of the mind—that is, unwise worrying over the duties of the present; unwise haste in the acquirement of wealth or knowledge and trouble borrowed from the past or future—is another of the prominent causes of sleeplessness. Work may engross the attention and powers of the mind and body during the day, and no harm result; but when worry tyrannizes the will, over-rides the judgment, and holds ruinous carnival in the citadel of the brain at night, then arise the most disastrous dangers. An eager desire to become rich impels us to unnatural toil while the day lasts, and drives us mad in the contemplation of the harassing theme during the still watches of the hours of darkness. But worst of all are the fearful apprehensions in which we sometimes indulge concerning the possibilities of the future. We are kept awake many times, when we ought to be asleep, in our eager endeavors to make ready for the crossing of bridges which we may never reach.

Fourthly, the natural temperament of some people is a formidable obstacle to the securement of needed sleep. Those of a bilious temperament are inclined to melancholy, and the cheerless gloom which surrounds a person of such a temperament is a marked and chilling hindrance to repose. The nervous temperament impels its owner to rapid and continued action, until the exhaustion and anæmia are so great as to induce irritability and sleeplessness.

Fifthly, we may record the fact that localized disease in some portions of the body other than the brain, may, by reflex influences, tend to wakefulness. This is particularly true concerning diseases of the heart, which disturb the circulation; also diseases of the lungs, which produce cough; and diseases of the stomach, such as dyspepsia and gout. The former break repose by sudden demands upon the mind for attention; the latter by producing pain after each inception of food. Again, diseases of the liver or bowels may so far impede or derange the circulation as to produce sleeplessness. The kidneys, the bladder, the genital organs (particularly those of the female), are likewise the seats of sleep-disturbing disease. * * *

Should excessive anæmia exist, and a state of nerve irritability and trepidation be thus produced, we shall find that the best means with which to combat such sleep-endangering forces will be the administration of liquid food, such as hot milk, beef tea and broths, about an hour before sleep is intended By doing this the impoverished blood is speedily nourished, and increased, not only in quantity, but in volume, to the required degree. * * *

Another natural means for inducing sleep is *massage*, or muscular manipulation. This method is of peculiar value to all that class of persons who are addicted to sedentary habits; to those who take too little exercise, and to those who suffer from imperfect circulation, and digestion and assimilation of food. * * *

Among the simple means for inducing sleep, to which all may aspire, are warm baths, fresh air, comfortable beds, sufficient and proper bed clothing, and proper position in bed.

Health, comfort and sleep may be obtained, after a hard and irritating day's work, by a warm bath, a cold *douche* following the bath, a brisk rubbing following that, just previous to retiring for the night. * * *

Fresh air should be freely supplied in every sleeping room, yet the sleeper should be protected from even moderate drafts, for these, though apparently slight at first, will produce chilliness of one portion of the body, while another portion may be overheated, and thus a disturbing inequality of circulation ensues.

Beds should be firm in texture, level and well elevated from the floor, for thus complete circulation around the bed is secured, and the sleeper is above the influences of some of those dangerous gases which are likely to accumulate in sleeping rooms. The position of the head is of importance. In cases of hyperæmia the head should be well elevated; in the opposite condition the patient should sleep upon a very small pillow. Bed clothing should be sufficient to insure comfort, yet care should be taken against using too much. Bed clothing should be porous. Soft woolen blankets are the best. Tightly woven and stiffly starched counterpanes are objectionable, because they do not favor good ventilation. * * *

For the mental excitements which accompany acute febrile diseases, with active cerebral congestions, intense anxiety and apprehensions of death or disaster, preventing sleep, *aconite* leads the list. Disturbances of the mind after fright, or anger, are relieved by this valuable drug. One of our patients, brought in while suffering with acute mania, after a week's sleeplessness in spite of heavy doses of chloral, and where fright, anger, and restlessness were intermingled, so to speak, were promptly relieved, and made to sleep sufficiently, with a few doses of the third centesimal dilution of *aconite*.

Actæa racemosa works its effects directly upon the cerebro-spinal system, as "a rheumatic irritant producing *erethistic hyperæmia* of the brain and spinal cord, and through these the whole muscular system." (Hale) Sleeplessness from such a condition is almost inevitable. Hence we find *actæa* an invaluable remedy for the production of sleep, in the case of drunkards who are suffering from the effects of stimulation, and who are passing through the horrors of delirium tremens. Opium eaters, or those who are trying to stop the use of opium, and those who are suffering from the effects of protracted muscular strain, from toil, watching or exposure, are strikingly benefited by the use of *actæa*. Dr. Geo. B. Palmer prefers the use of *macrotin*, the active principle of *actæa*, for drunkards and opium eaters. The symptoms upon which *actæa* is prescribed are, intense prostration, pain in the base of the brain, extending to the nape of the neck, and sometimes spreading over the shoulder. Mentally there is a sense of crushing depression, a feeling as if the mind were wrapped in the blackness of eternal darkness. Throughout the body there is a condition of active and distressing tremulousness.

Arsenicum is pre-eminently a remedy for the sleeplessness of those who are suffering from blood degeneration, and from mal-nutrition accompanied by exhaustion of the nervous system. Not only is the brain anæmic, but the entire body likewise. To anticipate good results from drug action in such cases, the remedy must be applied with a view of affecting favorably the blood itself, and through it the nerve centres.

By the liberal use of milk and beef tea, and by keeping the weak and exhausted patient in a prone position both day and night, the subtle and charming effects of *arsenicum*, as a restorative medicine, are made manifest in pleasant and abundant sleep at night, and a rapid regaining of health and spirits throughout the coming day.

* Excerpted from advance sheets of the Trans. of the Hom. Med. Society of the State of New York.

Arsenic has a restlessness and anxiety which rivals that of *aconite*. But the former is the restlessness of anæmic irritability, while the latter is the restlessness of erethistic hyperæmia.

A new remedy for the relief of sleeplessness following alcoholic or narcotic stimulation, and mental excitement due to any form of overtaxing of the brain, has been put upon the stage of active usefulness. That remedy is *avena sativa*—the common oat. Its action upon the nervous system is not yet fully understood, but the good results following its use by some very careful and observing physicians, entitle it to further proving and clinical experimentations.

Among the remedies which control the circulation, and thus affect the nervous system, we may name *baptisia*, *gelsemium* and *veratrum viride*.

Baptisia overcomes the quiet but persistent wakefulness of those suffering with profound melancholia, accompanied by tendencies to the typhoid state.

Gelsemium has a somewhat similar form of sleeplessness; that is, the patients are quiet, dull and stupid, yet they fail to sleep. The distinguishing difference which exists between the *gels.* and the *baptisia* patient is to be found in the general condition, and in the causes affecting the nervous system of the individual case. The nervous system of the *gels.* patient is exhausted by overwork or debauch; that of the *baptisia* case by imperfect nourishment of the nerve tissues with the pabulum of impure blood. *Gelsemium* patients seem ever on the verge of profound slumber, but are unable to pass the gulf that lies between them and needful rest. Such patients are the victims of an overtaxed and exhausted brain. * * *

Veratrum viride, unlike *baptisia* and *gelsemium*, has intense restlessness. In this respect it resembles *aconite*, but the latter is full of fear and apprehension, while the former is quarrelsome and inclined to be cross, like *belladonna*.

Veratrum viride is useful in the sleeplessness of acute fevers, of puerperal mania, and the excitement preceding or following attacks of epilepsy. A tendency to spasmodic action of the muscles will perhaps serve to differentiate *veratrum viride* from *aconite;* and from *belladonna*, by reason of the fact that the mental disturbances are somewhat milder in degree, while the fever is more severe.

Of all remedies in the Materia Medica, probably none acts so directly and so positively upon the brain as *belladonna;* consequently we come to rely upon it as one of the chief remedies for the relief of those cerebral diseases of a congestive or inflammatory nature which tend to prevent sleep. From the insomnia of mania to the dazed sleeplessness of melancholia with stupor, this drug exerts its powerful influence, and its persuasive charms may be exercised upon every form of cerebral disorder and mental distress. Its symptoms are familiar to every practitioner. As a practical hypnotic without narcotism, its success depends largely upon its mode of application. When the brain is over-supplied with blood, and the mind is lashed into a fury by the spurring action of the arterial torrents, then the mildest and almost imperceptible doses of *belladonna* will manifest a control over the excited mental forces more marvelous than the strange juggleries of the lion-tamer. On the contrary, when the brain forces seem utterly befogged and overpowered by the intensity of blood-pressure, when the pupils are widely dilated, and when tetaniform convulsions seem impending, then material doses of the drug are required to dislodge and disperse the enemy.

Cactus and *digitalis* are sometimes required in cases of sleeplessness; the former where the pain and constriction about the heart produce a silent sadness of mind, with a disposition to weep and mourn night and day; the latter where cardiac distress induces an anxiety similar to that of *aconite*.

Coca is useful as a sleep producer in cases of mental exhaustion, where at times the patient seems utterly prostrated, and at other times remarkably bright and well, and ready and eager for any work. *Coca* is also beneficial where the patient after going to sleep is suddenly awakened by a sense of shock in the brain. The pathological condition which exists in such cases is, we believe, that of anæmia spasmodica. Weak and nervous women, and worn out brain-workers, are peculiarly liable to such conditions.

Allium cepa, the common onion, has a popular reputation as a remedy for sleeplessness. In mild cases of brain fag, accompanied by catarrhal disturbances of the nasal passages and throat, with tendencies to neuralgic pains, and where these external irritations excite the mind, it is an effective remedy. The raw onion may be eaten just before retiring, or the mother tincture, or lower potencies may be used.

Chamomilla is useful as a hypnotic if the patient suffers from dull, unrelenting and distracting pain, such as a nightly toothache. This remedy is particularly serviceable if the patient is cross and irritable, and feels inclined to get out of bed and walk the floor. If, instead of being cross and obstinate when suffering severe pain, the patient is anxious, fearful, and makes a great fuss, then *aconite* will relieve.

Coffea is indicated when the nervous erethism is still more acute and sensitive than it is in either *chamomilla* or *aconite*. The absolute and unutterable æstheticism of sensitiveness is reached when *coffea* is indicated. The bad effects of quite too good news are likewise successfully combated with *coffea*.

Hyoscyamus has the sleeplessness of *belladonna*, but not the intense congestions and inflammations of the latter drug. It has a high degree of mental excitement, but not the maniacal fury of *stramonium*. Standing, as it does, between these two extremes, it is, perhaps, more frequently required in practice than either *belladonna* or *stramonium*. *Hyoscyamine*, the active principle of *hyoscyamus*, is said to produce anæmia of the brain; hence its homœopathicity to anæmia when it exists in nervous and overworked persons. For sleeplessness in such cases, particularly where the patient is easily perturbed in mind, it is an effective remedy.

Hypericum, "the *arnica* of the nerves," may be used after all nerve injuries, and where sleeplessness follows these, and where, likewise, the brain has been strained by intense and continued exertions.

For the sleeplessness of grief, no remedy compares with *ignatia*. The *ignatia* patient broods quietly over the sorrowful experiences of the past, and rises but slowly from the "slough of despond" into which the loss of health, friends or property has plunged him.

Aconite and *opium* may be called for in cases of sudden shock from bad news, the accompanying symptoms determining the demand for either one or the other. In one case agonizing restlessness will exist; in the other, dullness and dazed depression.

Pulsatilla may be serviceable in the sleeplessness of mild and tearful young woman, while *natrum muriaticum* is required by those who are full of *boisterous* grief, and who, though young, have the appearance of being prematurely aged.

Kali bromidum is a drug which produces true anæmia of the brain. Its use, in massive and overpowering doses, has caused many disastrous results; yet the same may be said of *mercury*, *opium* and *antimony*.

Where insomnia from anæmia exists with no other marked indications, we have found grain doses of the first decimal trituration remarkably efficacious. This is particularly true when the remedy is used upon patients suffering from acute and painful diseases.

Nux vomica is a drug whose value as a hypnotic is well known to the profession. It is specially applicable in cases of recent debauchery or gluttony. Those who are sleepless from a recent "drunk," or the surfeit of a

XUM

late and rich supper, will find *nux* a panacea for their pains, and a happy antidote for the disgust which such practices excite in the breast of Morpheus.

Nux likewise overcomes the ill effects of hard study and sexual excess, and enables the victim to secure, with comfort and safety, a not otherwise easily obtained morning nap.

Another valuable remedy for sleeplessness following intense mental overwork and anxiety, and coupled with a distressing confusion, pain and vertigo in the head, is *phosphorus*. Five drops of the tincture in half a glass of rain-water, a teaspoonful every half hour during the evening, followed by a bowl of hot soup, or a cup of beef tea at bed-time, will generally relieve the pain and restlessness of brain-fag, and secure to the patient a sound and refreshing sleep during the night. Dr. Conant tells me that he has found *phosphorus* useful when the patient falls asleep easily and is just as easily awakened. The *phosphorus* case sleeps and wakens many times in a single night.

Opium is, *par excellence*, the world-famous narcotizing agent, by which the brain is stupefied, and unnatural and unhealthy sleep produced. It may be applied to mitigate the stupor of severe cerebral congestions, particularly where there is a tendency to apoplexy or paralysis. We remember a case where *opium* thus applied caused the patient to sleep lightly and naturally, who, previous to its use, was accustomed nightly to sink into a stupor from which he could not be aroused until eight or nine o'clock in the morning. Under *opium* he awoke naturally, according to previous habit, at 6 A. M., without external assistance.

Secale cornutum produces at first marked congestions, followed by anæmia and sleeplessness. There is a tendency to paralysis, and particularly formication. These sensations in cutaneous nerves, as if ants were crawling over the skin, tend to excite and worry the patient, and stimulate a feeling of anxiety and apprehension, which prevents sleep. As a "*regulator*" of the circulation in anæmic cases, and as a promoter of sleep, *secale* occupies a prominent position in the Materia Medica.

For the sleeplessness of utter mental and physical inanition, when food fails to nourish, when the heart loses courage, and when there is abject despair and total absence of hope, we find that *silicea* will often work a wondrous and magical *presto* in the condition of affairs.

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Each case must be individualized, and both the conditions and symptoms noted with scrupulous care. When practicable, the conditions must be changed from abnormal to normal, as far as possible, by hygienic and dietetic means. * * *

NOTEWORTHY PAPERS IN RECENT OPHTHALMOLOGICAL AND OTOLOGICAL LITERATURE.*

I. "Jequiritic Ophthalmia." In his recent communication on *jequiritic ophthalmia*, De Wecker ("Ann. D'oc.," Nov.–Dec., 1882) relates his experience in the use of this remedy for granulations of the eyelids or trachoma, and arrives at the following conclusions: 1. A solution of the *jequirity seeds* (those of a plant which grows in some of the countries of South America) produces a purulent ophthalmia, which has a tendency to a croupous character, the intensity of which is greatly dependent upon the strength of the solution used and the number of times it is applied. 2. The remarkable fact that the cornea is in no danger of suffering from the disease produced. Only in one case, where the treatment was somewhat heroic, did the cornea suffer, and this only to a degree of a slight circumscribed desquamation of the corneal epithelium. 3. The ophthalmia produced by the drug rapidly cures the trachoma, and is always easy of control, the artificial disease disappearing of itself at the end of from the eight to the twelve days if the patient be confined in a dark room.

The paper is an important one, since of all the eye diseases which we know, trachoma is one of the most disagreeable, to the patient himself, to the surgeon, and in its ultimate effects on the eye, if the treatment is not carried out properly, sometimes for years.

The treatment of the disease does not resolve itself into getting rid of the granulations as rapidly as possible without regard to the after-effects of the disease or those of the medication, but to rid the conjunctiva of the granulations with the least possible damage to the tissue in which they have had their seat. For instance, if the lids be cauterized too strongly the granulations will disappear, it is true, but so also will the normal tissue, and to such an extent, that the after-effects are almost, if not quite, as bad as the disease itself. In short, we must so handle the patient that he may get rid of his disease and leave his lids in the best possible condition after it has gone. This requires a certain amount of skill on the part of the surgeon, combined with the greatest care and patience, since, as before remarked, the treatment may extend over several years. Therefore, any new treatment which will materially assist us in handling trachoma, will be hailed with pleasure, and by none more than the ophthalmic surgeon himself.

Wecker seems to think that he has found the golden remedy in *jequirity*, and several of our prominent oculists speak highly of it. But, nevertheless, it is a fashionable medicine to-day, and we prefer to wait awhile and see whether a remedy which is capable of setting up a croupous and even a diphtheritic conjunctivitis is not also liable to destroy a small percentage of the eye which will be treated with it. If, however, it really does cure trachoma, and *never* does anything worse than setting up a new disease, which can be so easily controlled, as by simply placing the patient in a dark room for a few days or even weeks, its entrance into our list of therapeutical agents will mark an epoch, at least in ophthalmic surgery.

II. In his paper on "The Blood Circulation in the Region of the Yellow Spot," Dr. Ayres (Archiv. of Ophth., xi., 4) describes an easy method of studying this circulation, and one which should be much more exact than the injection of an eye with any injecting fluid, since nature certainly injects her capillaries much more efficiently than we can ever hope to do artificially.

His method is to put *homatropia* into one eye and turning the back to a gas flame a little distance off, so adjust a reflecting surface (like that of a plain gold ring) close to the cornea, that a *blurred image* of the flame will be cast into the eye. If the head or the ring be moved, the bloodvessels in the retina will be seen with the greatest distinctness. If the other eye be opened and we look toward a piece of paper, the vessels will be seen as if projected on the paper, and can be drawn with a certain amount of accuracy. A nice wood-cut is given of the blood circulating around the yellow spot of his left eye. It shows an *anastomosing corona* of vessels around the yellow spot. The bulbs of the rods, or rather cones, can also be seen. It shows, further, the peculiar fact that the fovea centralis is not in the centre of the yellow spot, but a little downward and outward from the centre.

For the reason why the bloodvessels are seen in the above experiment we must refer the reader to the original.

III. In his article on "Eye Diseases and Masturbation," Cohn (Arch. of Ophth., xi., 4) arrives at the conclusion that when masturbation is practiced extensively it can produce a variety of eye diseases, such as photopsia, conjunctivitis, blepharospasmus, paresis of accommodation, and such other diseases as hypochondria, writer's spasm, tabes dorsalis, and even insanity.

* The next report will be devoted more especially to otology.

He has observed photopsia in a number of cases in young people whose eyes were in all respects normal as to objective symptoms. In all cases both eyes were affected, as we would naturally suppose if this condition depended upon a cause of such nature. In some instances there was such an asthenopia (fatigue on accommodation), that the patient could not read for any length of time without paining his eyes, as if he were afflicted with hyperopia.

In this connection we would refer the reader to an extensive paper on the diseases of the eye produced by abnormal menstruation, by Mooren, in the 'Archiv. of Ophthalmia," which, however, we will also take occasion to review. In this paper the author cites many interesting cases in which masturbation in woman produced various abnormal conditions of the eyes.

IV. In his article on "The Association of Sounds of Words with Colors," Mayerhausen (Klinik. Monat. f. Augenheilk, Nov., 1882) reports a case of a very rare condition in an educated lady, the wife of a physician, who since early childhood had connected the sounds of words with certain colors, thus forming for herself an idea of the beauty of the word, and of expressions into which they enter by the subjective color they call forth in her brain. Words of one syllable seem always associated with a single color, and polysyllabic words with a combination of colors. If the latter kind of words were spoken rapidly, the general color of the word assumed that of the most accentuated syllables, but if spoken slowly each syllable had a color of its own. That the color depended solely upon the sounds of the words she convinced herself from the fact, that words of a foreign language (or one that she did not understand) produced a subjective color, depending upon the way they were pronounced; this color had no relation to the way in which they were spelled. Further, on being tested, she always perceived the same color with the same word-sound; it was more especially the sounds of the vowels which produced the colors for her.

It is remarkable that she had no subjective color of green. The word "green" being perceived as milky-white, and what is very remarkable, although her favorite color was sky-blue, she never perceived this color in connection with any word-sound.

In this connection we would naturally suppose that since her favorite color must have been the one which she would most willingly see, she would naturally try to connect this color with her favorite words or those which sound most harmonious or pleasant to her. This not being the case, the condition described by M. is so much the more peculiar, since it is of necessity independent of the will, unless, indeed, the lady had her subjective colors all arranged before she had arrived at the stage at which she could be said to have known enough to have had a favorite color. In this way we could readily understand that it might have been the case, that she connected the predominant sounds she heard at the time that she first saw a given color with the color of the object she had before her eyes. There could be many objections raised to such an explanation, but it has also many rational arguments in support.

In my own case I can remember that there are many melodies which I involuntarily connect with scenes which were present the first time I heard them; many of the scenes being so trivial that they would have been long forgotten, and indeed are never remembered unless the peculiar melody occurs to me, or happens to be produced from some extraneous source.

This case of Mayerhausen is the sixth on record of the association of certain word sounds with colors.

V. Goldzieher, in his article on "Lymphadenitis Conjunctivæ" (Centralbl. fur Prakt. Augenheilk, Nov., 1882), describes a case which is not only interesting to specialists in ophthalmology, but also to pathologists in general. It was a tumor of the lower lid in a boy of fourteen, who had swollen lymph glands in the region of his ear, beneath the angle of the lower jaw and also in his neck. The ocular conjunctiva was swollen and projected away from the globe. The tumor, which was the size of a hazel nut, occupied a position in the outer half of the fornix, but was not attached to the sclera. It had the appearance of a dense, hard chancre of the conjunctiva; there was no appearance of acute inflammation or of granulation of the eyelids. He therefore considered it as similar to the other lymphatic disturbances which we have before mentioned in the region of the ear, jaw and neck.

He was at first inclined to consider it as a case of primary tubercular deposit, although it did not correspond to the other cases of such a condition already described in ophthalmological literature.

On removing the mass and examining it with the microscope, he found that it was an acute lymphadenitis of the conjunctiva, or a simple inflammatory hyperplasia of the adenoid tissue found in this part of the eye.

VI. In his article on "The Treatment of Granulated Eyelids with Abrus Præcatorius," (Jequirity) Moura, Brazil (Annal. D'ocul., Nov.–Dec., 1882), gives his experience with this remedy, and also the method of its preparation. The seeds of the plant (which are red and about half the size of a small pea) are to be soaked for several days in cold water—or boiled in water for several (?) hours. When they are softened the spermoderma is to be removed, and the seeds reduced to a fine powder and macerated for several hours in the night dew. Filter, and with decoction the eyes must be bathed three times a day.

When the solution is concentrated, if it be dropped into the eyes, for three days in succession, after the first application the patient experiences a burning, lachrymation, headache, and weight in the eye lids; the next day *the inflammation is so intense that the patient cannot open his eyes, and the pain is intense.* [Italics our own.]

We report this second article on *jequerity*, first, because it is a new remedy, and second, because it gives a short description of the picture of the disease which is produced by the remedy itself. In other words, *jequirity*, when dropped into the eyes, sets up an inflammation, which is more or less intense, according to the strength of the solution used, and we may add, from personal experience, that it does not seem to be of much benefit unless it is strong enough to bring forth a genuine purulent condition of conjunctivitis. Therefore the remedy has a certain amount of danger in it, which is especially the case if it be given to the patient to use at home. Therefore, in our estimation, this should never be done, and when used it should be applied by the physician himself.

The serious nature of trachoma and of its results have been long known, and any method that can be invented for a speedy cure of the condition is certainly of benefit to humanity. So much so has this been appreciated by our older eye surgeons that it was once the custom to carry gonorrhœal pus from the urethra to the conjunctiva and to set up there that terrible condition, gonorrhœal ophthalmia, to try and do away with the granulations of the lids. But this proved to be by far too dangerous a proceeding, and the method came into disrepute. Now, if by treating the conjunctiva with *jequirity*, we can cause the supervention of a purulent condition, which we can readily control, and which when cured itself, though it lasts for a month or six weeks, leaves the eye free from its granulations, the remedy is indeed a valuable one.

This will be granted when we consider that trachoma may require regular and careful treatment with *sulphate of copper* (which is certainly the best medication which we have had up to the advent of *jequirity*) for *months* and even *years* before we conquer it. Again, in some cases the disease may be said to conquer the surgeon and ruin the eye in spite of the best care from the best of specialists of ophthalmology. Of course too much will be claimed for *jequirity* in the beginning, but we will try to keep our readers posted on the views of

ophthalmic specialists, which they cannot be expected to do for themselves, since their (the former's) writings extend over thousands of pages every year.

VII. In his article on "The Maturity of Cataract," etc., Förster (Arch. of Augenheilk, xii., 1) gives several points which are not only of interest to a specialist, but also to a general practitioner, the latter especially if he be in a position where he cannot consult an oculist conveniently.

He divides ripe cataracts into three classes. 1. Those in which there is no doubt as to maturity, and in which the mother-of-pearl sector like figures are absent from the surface; 2. Those which have a large brownish-yellow nucleus, which nearly fills the entire lens capsule; 3. Certain very slowly developing cataracts, with small, bright yellow or whitish nuclei and half-transparent cortex.

The article is of further value for specialists, but we quote so much of it in order to say a few words about the maturity of cataracts, which will be of more immediate interest to those who do not make the eye a specialty. If a physician has a case of cataract, he should not undertake to extract it, since the operation is the most delicate of all that can be undertaken on the human body. Besides this, it is the one operation in which the most delicate after-treatment is absolutely requisite to success; it may not be as far as saving the eye from suppuration is concerned, but certainly as to restoring to the patient the *best* sight we can give him. So much for the operation itself. But when should the operation be performed, or in other words, when is the cataract *ripe* or ready for operation? The exceptions to the rule which we are about to state are so rare that it may be considered that *when oblique light is thrown into the eye by a convex lens, and the proximal edge of the iris does not throw any shadow on the lens, the cataract is ripe. Again, when the lens is swollen so as to force the iris out of its proper plane, the cataract is not ripe and no operation should be undertaken in such a stage. If we look into the eye with an ophthalmoscope and find that there is still a red reflex from the bottom of the eye, the cataract is not ripe as a general rule; if the patient can count fingers at more than one foot, the same is also true.*

The article is one of much importance, and with the few rules we have added will certainly be of value to the practitioner, especially if he cannot consult an oculist conveniently. For instance, it is very easy to make the diagnosis of cataract, but it is not so generally understood how to tell when it is ripe or ready for operation.

The above knowledge on the part of the doctor might save the patient the trouble of making a journey to a specialist for operation, only to be sent back to wait until his cataract is mature, since no specialist would undertake to extract a lens unless it was ready for it. Because only under the latter condition can we hope to obtain the greatest amount of sight in any case of extraction of cataract, independent of the fact that if an unripe lens be extracted the patient runs much more chance of losing the eye by all kind of inflammations of his cornea, iris, ciliary body, etc.

Again, a hypermature cataract is not in a good condition for extraction, for many reasons; therefore it is the duty of the family physician to be able to tell just when the operation should be done, and when not; this is not to say that a hypermature (over-ripe) cataract cannot be extracted successfully, but it is by far more difficult to obtain a good result in the latter case than when it is *ripe*, or prime for operation.

Dr. Mooren, of Düsseldorf, has written a long article on the "Disturbances of Vision and Uterine Diseases" (Archiv. of Ophthal., Vol. XI., No. 3), in which he gives an experience of a great many years, which will be of the greatest value to us all.

He cites a multitude of cases (for which we must refer the reader to the original) which may excite eye trouble, both of a trivial and also of a more serious character.

To show what an influence the uterus can have on the eye, he cites cases of operations where there had been no reaction for fourteen days, which demonstrated symptoms of irritation on the advent of a perfectly normal menstruation.

Again, cases of keratitis which had resisted treatment up to the age of puberty got very much worse at this time, and ever after had a bad spell with every menstruation until the corneal trouble had been overcome.

Continued masturbation, especially in the case of women, rendered the eyes so irritable that the patient could not open them until after the habit had been conquered.

Any irregularity of the parametrium, as parametritis, tumors, etc., produced eye troubles that could not be done away with until after the uterus had been restored to its normal condition. In all such cases there was a disease of the uterus which was known to exist, and in all of them no local eye medication was of avail until the other trouble had been cured.

In another set of cases, after treating the eye disease for some time, and finding it intractable, he was lead to suspect a uterine trouble, and in the majority of such cases his surmise was correct. Such patients he would cause to be treated by specialists for such diseases, and when the result was satisfactory, the eye trouble was always more amenable to treatment.

We cull several important facts from this article. 1st. That when, in the case of females, an eye disease and one of the genito-urinary organs exist simultaneously, sometimes the former will not yield without a previous improvement in the other. 2d. That when an eye disease in the case of a woman is more resisting than it should be, the genito-urinary organs should be examined. 3d. That disease of the uterus, vagina, ovaries and even of the rectum may produce eye diseases, which may lead to blindness, but there is no evidence that an eye trouble can cause an irregularity in the other direction.

The manner in which a uterine trouble may influence the eyes to disadvantage can be readily understood when we remember, that even in normal menstruation, and also in all diseases of the pelvic organs, there is more or less intense congestion of the venous plexuses of the pelvic viscera.

He writes: when we remember that we find the plexus pampiniformis in the upper part of the ligamentum latum formed from the veins of the ovaries and tubes, and also the uterine plexus, standing in the closest relation to the lumbar veins, and these again connecting with the veins of the spinal cord, and that the veins of the vertebral column are strongly developed, and communicate above with the occipital veins, which in turn communicate with the transverse sinus, so that any considerable congestion of these venous apparatuses must press upon the neighboring nerve fibers, etc. We may form some conception how it is that there comes to be such an intimate connection between the genito-urinary apparatus and the organ of vision.

The article though quite extensive is well worth reading in the original (*loc. cit.*)

THE USE OF THE TUNING FORK IN THE DIAGNOSIS OF EAR DISEASES.

The tuning fork is mainly used in differentiating between middle ear and labyrinth disease. The kind of fork more generally used is the one known as Politzer's, and is the middle C of 512 vibrations per second. The fork may be applied to the front teeth, forehead, temple, vertex, mastoid process, and also held near the ear.

In the normal ear the tuning fork, when placed on the central incisors, is heard equally well in both ears; the same is true if placed on the vertex or on the centre of the forehead. If placed on the mastoid process, it is

heard better in the ear of the same side. It is heard longer when placed near the meatus than by bone conduction, that is, when placed on the teeth, etc. It has been discovered that if the meatus is stopped up by the finger or covered by the hand even, that the tuning fork is heard better as well as longer in that ear—unless the finger is pressed too far into the ear. This test requires to be made with the greatest care. If the tuning fork is placed on the vertex, or in the centre of the forehead, or between the central incisor teeth, and the patient, with closed eyes, states by a fall of the hand the precise moment at which it is not heard in either ear, and the hands fall simultaneously, we shall be quite sure that bone conduction is equally good in each ear. It will then be left for the voice or watch to test whether the hearing is perfect.

In testing for the location of the disease, it is better for the patient to signify the comparative length of time he hears the tuning fork in each ear, than to ask if he hears it better in one than in the other. It has been found in doubtful cases that if the fork is laid a little to one side of the median line, that it assists to confirm an opinion. For instance, the patient thinks he hears the fork best in the right ear, and it is then moved to the left side a little, and if he still hears it as well in the right ear or even hears it equally well in both ears, there is then no question of his hearing it better in the right. If the suspected ear is closed, and there is little or no increase in the length of time of hearing it, evidence grows stronger of middle ear disease. In general terms, the tuning fork will be heard by bone conduction *better* in the bad ear in middle ear disease, and *worse* in the bad ear in labyrinth disease. In many cases of middle ear trouble combined with labyrinth disease, the diagnosis will be very difficult indeed, and will require great ingenuity and judgment on the part of the surgeon. The subject is still further complicated by recent developments pointing to what has been called intermittent bone conduction. This has been recently studied by Burkner in the *A. F. O.*, XIV., 96, and by Dr. J. A. Andrews, in the *N. Y. Medical Journal and Obst. Review*, for Feb., 1882. The main points seem to be as follows:

1. A patient with catarrhal otitis, obstruction of the tube and collapsed membrana, with defective aerial conduction, also has bad bone conduction; but inflating the tympanum and restoring the position of the membrana to the normal, or at least, a bettered one, probably improves the aerial conduction, and also improves the bone conduction, which may be better in this ear than the normal fellow, in accordance with the *rule*. This condition may return to the former state, if the tube again becomes closed with collapse of the membrana.

2. Pressure upon the round or oval windows, from fluid in the tympanum, masses of inspissated secretion, as dried flakes of mucus, pus, blood-clots, etc., which interfere with bone and aerial conduction, but on removal of which, restoration of both forms of conduction results.

3. Excessive hyperæmia of the tympanum may interfere with both bone and aerial conduction, and on its subsidence these functions may be restored.

4. Anything whatever that interferes with the free vibration of the membrana tympani, the membrane of the round windows, the ossicula, including the impacted bone of the stapes in the oval window, interferes with bone conduction, which may be improved by the removal of the hindrance to free vibration of these parts.

The observations in intermittent bone conduction seem to point conclusively to the fact that absence of free vibration of the ossicles, the membrana and the membrane of the round window is the main cause of defective hearing. To test the bone conduction with utter thoroughness, would seem to require tuning forks representing every tone which is audible to the normal human ear.

OWEN D. POMEROY, M.D.

TREATMENT OF CHRONIC ABSCESSES BY INJECTIONS OF ALCOHOL.—M. Assaky reports fourteen cases of chronic abscesses, treated after Professor Gosselin's method. This method consists in the injection of alcohol, and is based on the antiseptic properties of this agent, and its action on inflamed or suppurating tissues. An incision about a third of an inch is first made, and the abscess-cavity, after its contents have been discharged through this opening, is washed out with alcohol of 90 deg. strength. The quantity of injected alcohol varies according to the dimensions of the abscess. It is necessary that the quantity be sufficient for application to the whole of the internal surface of the cavity. The seat of the emptied and injected abscess is then covered by a dressing of camphorated *eau de vie*.

This method, M. Assaky states, has the following advantages: it necessitates only a small wound of the integument, and so there is less risk of the ordinary complications of wounds, and the cicatrix is small and is hardly apparent. The superiority of the method, however, consists chiefly in the considerable abridgment it effects in the duration of the treatment of chronic abscess. In small abscesses and those of medium size, cure may be effected between the second and seventh days. This treatment may be applied to any chronic abscess that is circumscribed, and consists of one regularly shaped cavity. In most cases, one injection only is necessary; but when the abscess is very large, two or three may be required. The indication for a repetition of the injection would be a persistent purulent discharge. The injection of alcohol into the inflamed tissues, it is asserted, is not very painful.—*Gaz. Méd. de. Paris*, Nos 6 & 7, 1882.

THE DOCTRINE OF DESQUAMATION.—There is hardly any disease in regard to which diagnosis is at once so difficult and important as scarlet fever. All authors agree in saying that almost every prominent symptom of it may be wanting. All authorities describe, and all practitioners are familiar with, cases in which no suspicion of the disease exists until the occurence of desquamation, in circumstances which leave no doubt that it is only a part of scarlet fever. But surely desquamation itself is also a most variable process, so variable as to excuse a good deal of the variety of opinion on it which undoubtedly exists. It may be almost entirely absent, it may occur out of proportion to the amount of rash, it may be very long delayed, or it may extend over a very variable period.

Whether difference of opinion is sound excuse for difference in practice, the variety in the process itself and the occasional instances in which it is deferred indicate the safety of a rule of exclusion of at least six weeks, and if possible eight. Parents and patients will often rebel against this hard doctrine, but, considering the gravity of the disease, it is a safe one for medical men to hold.—*Lancet.*

CARBOLIC ACID IN ODONTALGIA.—Dr. G. D. Dowknott, Med. Sup. N. Y. Med. Mission, states in the *Medical News*, Feb. 24, that he has been very successful in the use of *carbolic acid* as a remedy for toothache arising from caries. He gives the following directions:

1st. Clean out and dry, by means of absorbent cotton, the cavity of the tooth. 2d. Apply the acid thoroughly in the following manner: take a piece of *wood*, according to the size of the cavity (a toothpick or a match will do), and dip the end into *carbolic acid*—full strength; should the hole be very large, a very small portion of cotton may be twisted around the end of the piece of wood. Care is required not to touch the surrounding tissues. It is scarcely needful to add that the acid crystals only need to be warmed to render them soluble.

The foregoing applies especially to odontalgia cariosa, and to odontitis; but it will also prove serviceable where the fangs of the tooth are affected.

XUM

ERYTHROXYLON COCA.—Dr. Conqueret, of Paris, in his recommendation of a certain wine of coca, says: "I have proved the efficacy of your preparation, which is at the same time useful and agreeable, in cases of nervous over-excitation with sleeplessness, of unilaterial headaches, in throat diseases accompanied with pain, in spasms of the stomach with intense thirst, and sometimes in bilious vomiting. As the first of all therapeutical rules is for me the one well-known since Hippocrates, which has been newly brought forward in our days by Hahnemann, under the formula, *similia similibus curantur*, I think that the efficacy of coca in the affections I have just enumerated is due to the application of the homœopathic law, and the well-known fact that the natives deceive their hunger, and calm the cravings of their stomachs by chewing and swallowing a substance which habitually increases the appetite, is a confirmation of my idea

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GELSEMIUM IN TETANUS.—Dr. John B. Read (*Brit. Med. Jour.*) reports the case of a strong, healthy mulatto woman, twenty years of age, who was suffering from tetanic convulsions, caused by a bit of broken glass upon which she had trodden, and which was imbedded in her heel. All attempts to find the fragments proved ineffectual. Familiar with the power of *gelsemium* to relax the voluntary muscles, he ordered twenty minims of the fluid extract every two hours. On the morning of the second day there was a slight improvement in the rigidity of the jaw, and the general spasms occurred only at intervals of three or four hours; but as the day advanced the jaw became more rigid, and there were violent contractions in the front and back of chest.

The dose of *gelsemium* extract was then increased to forty minims every two hours. During the third day the improvement was marked, but the medicine was still continued in forty minim doses. After this period the improvement was rapid and regular, and the dose was reduced to twenty minims, at which it was continued till full convalescence. There were no disagreeable symptoms of dimness of sight, double vision, or loss of strength accompanying its use, as sometimes is the case from much smaller doses; and as it exerts such a powerful control over spasms of the voluntary muscles, Dr. Read suggests its use in hydrophobia, especially when administered hypodermically.

THE MORTALITY REFERABLE TO ALCOHOL.—The *Brit. Med. Journal* says: At the end of a long and carefully prepared report recently drawn up by a committee of the Harveian society, it is concluded that there is, upon the whole, reason to think that, in the metropolis, the mortality among any considerable group of intemperate persons will differ from that generally prevailing among adults in the following important particulars, viz., a fourfold increase in the deaths from diseases of the liver and chylopoëtic viscera; a twofold increase in the deaths from disease of the kidney; a decrease of half as much again in those from heart disease; a marked increase in those from pneumonia and pleurisy; a considerable increase, and an earlier occurrence of those from disease of the central nervous system; a marked decrease in those from bronchitis, asthma, emphysema, and congestion of the lungs; a decrease nearly as great in those from phthisis, and a later occurrence, or at least termination of the disease; a very large decrease in those from old age, with an increase in those referred to atrophy, debility, etc., and the addition of a considerable group referred in general terms to alcoholism or chronic alcoholism, or resulting from accidents.

COCOLAC (says the *Medical Brief*) is a scientific combination of the genuine *erythrox. coca* and pure milk. It is the best form to administer *coca*, as it is pleasant and reliable.

TREATMENT OF VENEREAL AND COMMON WARTS.—Professor Unna (*Monatsh. F. Prakt. Derm.*) recommends for the treatment of both venereal and ordinary warts the continuous application of *ung. hydrargyri* containing five per cent. of *arsenic*. Cure is effected not by necrotic destruction of the warts, such as occurs in the use of caustics, but by resorption, as in cases of spontaneous cure.

THE INFLUENCE OF ALCOHOL ON BRIGHT'S DISEASE.—A correspondent of the Philadelphia *Med. and Surg. Reporter* presents the following singular case:

"A. W., age 33, is to-day a man weighing about 180 pounds, is strong, robust, and apparently as well as any man can be. Well, about eight years ago, feeling a little out of sorts, he consulted his physician, and found he had kidney disease, there being both albumen and casts in the urine. A careful life was enjoined, which was followed for, may be, six months, when he relapsed into his old habits, viz., the quite free use of whiskey and tobacco. He had been addicted to both of these habits since very early manhood. About three years ago he contracted a most terrible case of syphilis, suffering with enormous lupoid sores all over the body, and the most profound constitutional symptoms for more than a year. During this time he drank and smoked harder than ever. In fact, so depressed was he by his misfortune that he did little else than loll about and keep all the time, to a certain extent, under alcoholic influence. Finally the sores healed and he commenced to improve. Having been reduced to 120, he now, as I have said, weighs 180 pounds. While he drinks less than formerly, yet he now daily consumes at least ten to twelve ounces of whiskey. I should add that he had a sanguine temperament, and the most remarkable easy-going disposition I have ever encountered, which may, perhaps account for the mystery."

HOW TO SMOKE WITHOUT INJURY.—An English workingman who found that his pipe was beginning to seriously affect his nerves, was recommended to fill the bowl of the pipe one-third full of table-salt and press the tobacco hard down upon it, as in ordinary smoking. The result was very satisfactory. During the process of smoking the salt solidifies, while remaining porous, and when the hardened lump is removed at the end of a day's smoking it is found to have absorbed so much of the oil of tobacco as to be deeply colored. The salt should be renewed daily.

ARE PALLIATIVES NEEDFUL?—Dr. Bayes, late of Brighton, Eng., testified on this point as follows: "Dr. Pope, I think, instances *gall-stones* as one of the cases in which homœopathy is not to be trusted. Here Dr. Berridge, I think, objects very properly. I can bear witness to the remarkable power of *calcarea carb.* in relieving the pain caused by the passage of gall-stones. Dr. Hughes alludes also to this effect.

"Again, very violent spasmodic stricture of the rectum I have seen yield completely to *coffea cruda* in the twelfth dilution. I knew the case of a well-known baronet who, when dying from *cancer of the tongue* got *no relief* from opiates, nor from injections of *morphia*, etc., yet who sank to his inevitable rest with comfort and freedom from pain, his last weeks soothed by *spigelia*, his friend and physician being prompted to this homœopathic remedy by a homœopathic doctor who did not even see the patient. Latterly a lady consulted me who had for many years suffered violent right-sided pain from liver to right ovary, under some of the most celebrated doctors of the anti-homœopathic school, so excruciating as to refuse to yield to opiates and subcutaneous injections of *morphia*, etc.; she was wholly cured, and is now on a journey of more than a thousand miles, after taking *cimicifuga racemosa* 3x (two-drop doses twice a day), and of the same medicine 30th dilution every night for a week."—*Amer. Homœopath.*

A Five-franc Piece Vomited up After Lying in the Stomach Eighteen Days.—Dr. Sumner Pixley relates the following in the *Medical and Surgical Reporter*: In September, 1874, a young lady, during a scuffle over the possession of a five-franc piece, inadvertently swallowed the coin, which lodged at the cardiac orifice of the stomach, causing much pain, nausea and vomiting. The doctor, seeing at once that he could not extract the coin, took a probang and pushed it into the stomach, employing considerable force in the operation. Vomiting of blood, together with the contents of the stomach, at once followed, and continued at intervals for eighteen days, attended by emaciation and loss of strength and appetite.

Often during this time, whenever the coin changed its position, she would fall insensible, as though struck in the stomach by some instrument. The young lady frequently remarked that she "could *nearly* vomit up the money," and expressed the thought that it could be more easily done if the stomach were filled to repletion. She accordingly filled her stomach with pancakes, and tried the experiment. It was immediately successful, the coin being ejected with such force as to knock out the two upper incisor teeth. Large quantities of blood were thrown up, and digestion was greatly impaired. This condition of affairs lasted twelve months; and during the first three months in was with great difficulty that food of any kind could be retained in the stomach. Up to this time the action of the stomach showed ulceration, by the vomiting of blood and pus. These gradually ceased, and the patient is now well.

Digestibility of Oysters.—In a communication to the Phila. *Med. & Surg. Journal*, Dr. Charles L. Dana points out some prevalent errors concerning oysters. It has been said that the oyster, on account of its hepatic diastase, has the power of digesting itself. In a series of experiments, Dr. Dana has given the mollusk some excellent opportunities of doing so, but it declines to digest even its own liver. As to the superior digestibility of raw oysters over cooked, it was found that when boiled for a short time, or roasted in the shell, they were nearly if not quite as rapidly dissolved as the raw. Cooking, in fact, loosened the muscular fibrils, thus allowing the peptic juices to penetrate. Referring to the current belief that oysters will dissolve in ale while they become hard in brandy, and hence that ale should be taken with oysters instead of liquors, Dr. Dana denies the solvent powers of ale, and demonstrates the fact that it really hardens the oyster even more than brandy does.

Pomade for Comedones.—Unna, in *Virchow's Archives*, recommends the following for comedones: *Kaolin*, 4 parts; *glycerine*, 3 parts; *acetic acid* 2 parts, with or without the addition of a small quantity of some etherial oil. With this pomade he covers the parts in the evening, and if need be during the day. The comedones can be easily expressed after several days, most of them coming out by washing the parts with pumice-stone soap.

Explosive Mixtures of Medicines.—(*Seminario Farmaceutico.*)

1. *Hypophosphite of lime, chlorate of potash* and *sulphate of lime*, mixed in equal proportions, are explosive.
2. A solution of one part of *chromic acid* and two of *glycerine*.
3. *Chlorate of potash*, and dental powders containing carbon, explode in the mouth.
4. A pilular mass containing *permanganate of potash* mixed with vegetable extracts and iron, easily inflames.
5. *Chlorate of potash* or the permanganate or other explosive substances must not be triturated with *Glycerine*.

Chlorate of potash and *tannin* explode if triturated, as do *chlorate of potash* and sugar. *Iodine* or an iodide and a nitrate may explode.—*Virginia Med. Monthly.*

A New Hypnotic and Depresso-Motor.—Herr Schiffer, of Berlin, has recently been studying the action of *guachamaca*, a Venezuelan plant. It acts very much like *curare*, in allaying spasm, and in large doses causing a general paresis. The juice taken from the plant in the rainy season makes the most powerful preparation. If ten milligrammes of the extract are given to a frog, an interval of fifteen to eighteen minutes passes before any effect is noticed. After this period, however, the action is rapid. The animal becomes stupid, allows the head to fall, permits itself to be laid on its back, and does not draw back the leg if extended, etc. So far its action is exactly similar to that of *curare*. But now comes the difference. The respiration continues; the circulation and cardiac activity are undisturbed. Schiffer believes that in *guachamaca* we have an agent capable of combating disorders of the motory apparatus as well as a useful hypnotic.—*Med. Record.*

The Causes of Diabetes.—Among 600 cases of diabetes treated by Dr. Richard Schmitz (*Br. Medical Journal*) 248 were in families in which diabetes had already appeared, 96 were in neuropathic families, and in 183 cases the exciting cause of the disorder was attributed to some disturbance of the nervous centres. In 153 cases the disease was attributed to an excessive indulgence in sugar.

CARLYLE AND EMERSON AS LETTER-WRITERS.

The fine touch in Emerson's letters, as in his other writings, is always the spiritual touch. For the rest, felicitous as they are, for the most part they suffer a little by comparisons with Carlyle's; they are less natural, more composed, have too studied a quaintness. It was his practice, apparently, to make two drafts of these communications. The violent color, the large, avalanche-movement of Carlyle's style—as if a mass of earth and rock and vegetation had detached itself and came bouncing and bumping forward—make the efforts of his correspondent appear a little pale and stiff. There is always something high and pure in Emerson's speech, however, and it has often a perfect propriety—seeming, in answer to Carlyle's extravagances, the note of reason and justice. "Faith and love are apt to be spasmodic in the best minds. Men live on the brink of mysteries and harmonies into which they never enter, and with their hand on the door-latch they die outside." Carlyle's "doctrine, reduced to the fewest words, is that life is very serious and that every one should do his work honestly. This is the gist of the matter; all the rest is magnificent vocalization."—*Henry James, Jr., in the June Century.*

MISCELLANY.

—Denver, Colorado, is to have a hospital for women.

—Urea is the latest addition to the therapeutic list. What next?

—The Maryland *Medical Journal* will hereafter issue as a weekly.

—It is proposed to use the electric light in the dissecting room.

—Dartmouth (N. H.) Medical College proposes to establish a hospital.

—Dr. T. D. Bradford died in this city, May 17, of heart disease, æt 45 years.

—Dr. Roberts Bartholow has been made Dean of Jefferson Medical College.

—Dr. E. S. Bailey has been made Registrar of Hahnemann College, Chicago.

—There has been established in Louisville, Ky., a School of Pharmacy exclusively for women.

—Massachusetts is at present quite disturbed by the discovery that it has diploma mills within its borders.

—Dr. Fordyce Barker has been elected to his third term as President of the New York Academy of Medicine.

—The Homœopathic Hospital, W. I., reports 936 patients treated during April, with a death rate of 3.84 per cent.

—The American Medical Association will meet in Cleveland, Ohio, June 5, and is about to materialize a monthly journal.

—The University of Pennsylvania has established a voluntary fourth year of instruction. We wish it might be made compulsory !

—A cloth wrung out of boiling water, and applied to the cardiac region, has resuscitated persons apparently dead from anæsthesia.

—Dr. Bigelow, of Boston, has won the highest of the Argenteuil prizes ($1,200,) for a medical treatise, sent to the Paris Academy of Medicine.

—The introduction of a few drops of chloroform into the ear of a guinea-pig caused death by meningo-encephalitis. We should beware of such agents !

—The Hom. Med. Society of the State of Wisconsin will meet at Madison, June 12, 13 and 14, in joint session with the Wisconsin Academy of Homœopathy.

—Prof. Robert Bunsen, for many years stationed at the University of Heidelberg, has just been elected a foreign associate of the Academy of Sciences in Paris, to fill the vacancy caused by the death of Wohler.

—The eclectics are attempting to establish a department in Michigan University. It would be better if this institution would abolish sectarianism altogether, and establish a school for teaching all there is in medicine.

—New Field for Women Physicians.—The Russian journals state that General Tchernieff is about to establish a hospital for Mussulmen women at Tashkend. It is to be presided over entirely by Russian female physicians.

—Dr. H B. Wilbur, the head of the State Institution for Idiots, died suddenly last month. His work was modest and noiseless, but of that practical kind which carries with it the benedictions of his associates and fellow citizens.

—Prof. E. C. Franklin announces his withdrawal from the Medical Institute in Detroit, because of "publicly displayed hand bills, etc." There are a host of these so-called "institutes" in existence, savoring of quackery, which the profession should discountenance.

—The Central New York Homœopathic Medical Society protests against the adoption, by the American Institute of Homœopathy, of the resolution providing for freedom of opinion and action of its members, and will attempt, at the forthcoming meeting, to "expunge it from its records."

—The Connecticut State Society has laid upon the table a proposition to send a delegate to the New York Society! How sad ! Probably the New York Society will fail to hold a meeting in consequence, and wait until the Nutmeg State will deign to send a representation from its august body.

—Dr. Pedro Rino y Hurtado, one the most eminent new school physicians in Spain, died on December 15, 1882, full of years and honor. He was noted for his great industry. Some idea of his powers of work may be gathered from the fact that he began anew to edit a journal at the age of seventy-one.

—Removals.—Dr. J. Ralsey White, to 1976 Madison ave. ; Dr. H. M. Hitchcock, to 21 E. 61st st. ; Dr. W. J. Baner, to 20 W. 47th st. ; Dr. W. P. Fowler, to 27 N. Clinton st., Rochester, N. Y. ; Dr. Wm. M. Butler, formerly of the State Homœopathic Asylum for Insane, Middletown, N. Y., to 393 Gates ave., Brooklyn.

—Dr. W. N Bell, Resident Physician at the Five Points House of Industry, reports for the year ending March 1, 1883, 1,080 patients treated and 2,787 prescriptions dispensed in that institution, with no deaths.

Of the cases treated fourteen were pneumonia, three pleuro-pneumonia, twelve measles, fourteen bronchitis, two scarlet fever, one Bright's disease, etc.

—Drawing the Line.—Dr. Joseph W. Howe, late Professor of Clinical Surgery in Bellevue College, has been compelled to resign his chair on account of his favoring the new Code of Ethics. The college is in a great measure under the control of the Flints, father and son. The senior Flint has not been in active practice for a generation, if ever, and the son is simply a teacher of physiology, who probably never made a dozen prescriptions in his life. We congratulate Dr. Howe in getting out of a sinking ship.

—Official Changes.—Dr. A. P. Williamson has resigned his position as Chief of Staff of the Homœopathic Hospital, W. I., and has been appointed first assistant physician at the State Homœopathic Asylum for the Insane at Middletown, vice Dr. Wm. M. Butler, resigned; Dr. Butler will enter into general practice at 393 Gates Avenue, Brooklyn. Dr. T. Morris Strong, of Allegheny, Pa., has been appointed Chief of Staff of the Homœopathic Hospital, W. I., and has already entered upon his duties there.

—The Fortieth Anniversary and Thirty-sixth Session of the American Institute of Homœopathy will be held at Niagara Falls, commencing at 10 o'clock A. M., Tuesday, June 19, 1883, and continuing four days. Headquarters and place of meeting, International Hotel. The proprietors agree to furnish the members of the Institute and those who may accompany them, good table fare and good rooms at $3.50 per day, and give to all members and their friends stopping with them a sumptuous banquet Thursday evening, June 21, at 8 o'clock, and furnish music for the same, without additional expense. Responsible parties residing at the Falls have given their pledge that Goat Island, and all other places of interest to the tourist, shall be accessible to the members at *one half* the usual rates. Carriages will be furnished for excursionists for $1.00 per hour or $5.00 per day. Rooms may be secured in advance through the Chairman of the Local Committee of Arrangements, A. R. Wright, M.D., 166 Franklin street, Buffalo, N. Y.

The President, Dr. Bushrod W. James, requests the Executive Committee and the Chairmen of the Bureaus and Standing Committees, to meet him in conference at the International Hotel, Niagara Falls, Monday evening, June 18, at 8 o'clock.

The preliminary meeting well be held in the parlor of the hotel the same evening, at 9 o'clock. It will be a social gathering to which all members present and their friends are invited.

The Institute will hold three sessions daily, from 10 o'clock A. M., to 1 o'clock P. M., and from 3 to 6 and 8 to 10 o'clock P. M., except as otherwise stated ; subject to the action of the Institute. One hour and a half will be allotted to each Bureau.

XUM

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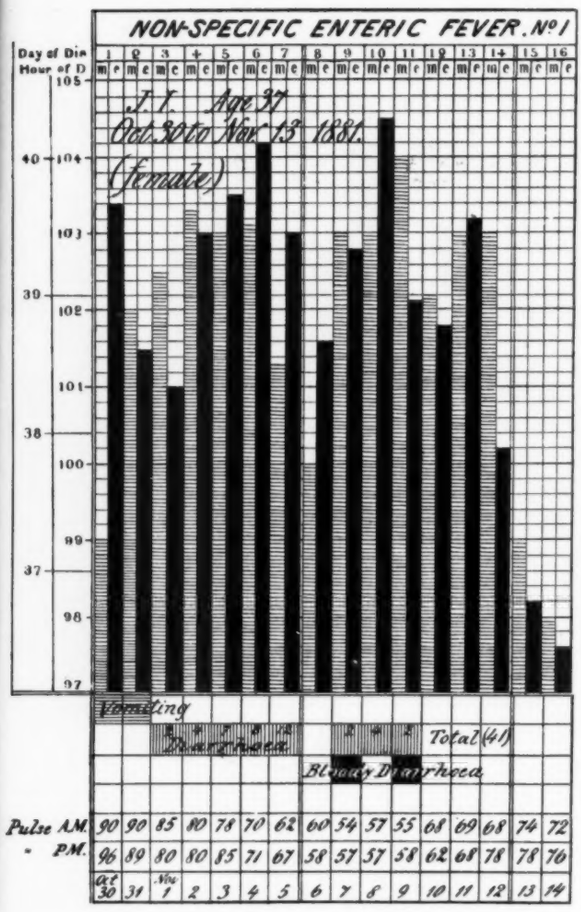

NON-SPECIFIC ENTERIC FEVER. Nº 1
J. T. Age 37
Oct. 30 to Nov. 13 1881.
(female)
Vomiting
Diarrhoea
Total (41)
Bloody Diarrhoea
Pulse A.M. 90 90 85 80 78 70 62 60 54 57 55 68 69 68 74 72
" P.M. 96 89 80 80 85 71 67 58 57 57 58 62 68 78 78 76
Oct 30 31 Nov 1 2 3 4 5 6 7 8 9 10 11 12 13 14

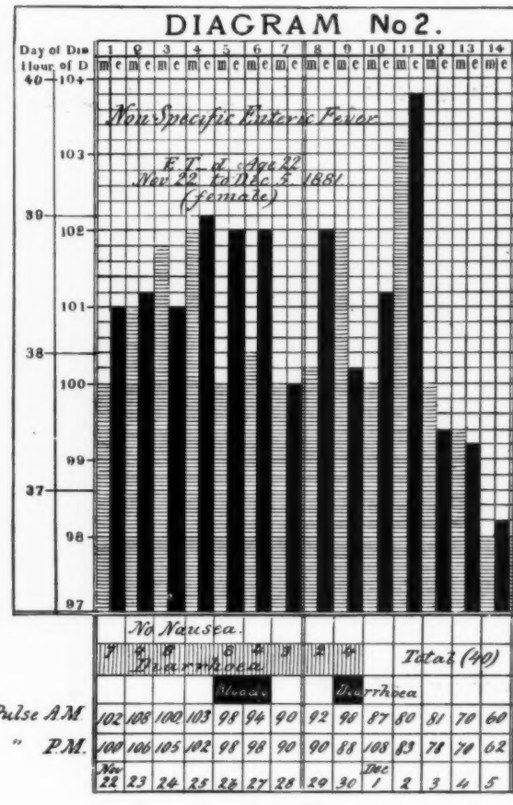


DIAGRAM No 2.
Non-Specific Enteric Fever.
E. T. d. Age 22
Nov 22 to Dec 3 1881
(female)
No Nausea.
Diarrhoea
Total (40)
Blood
Diarrhoea
Pulse A.M. 102 103 100 103 98 94 90 92 98 87 80 81 70 60
" P.M. 100 106 105 102 98 98 90 90 88 108 83 78 70 62
Nov 22 23 24 25 26 27 28 29 30 Dec 1 2 3 4 5

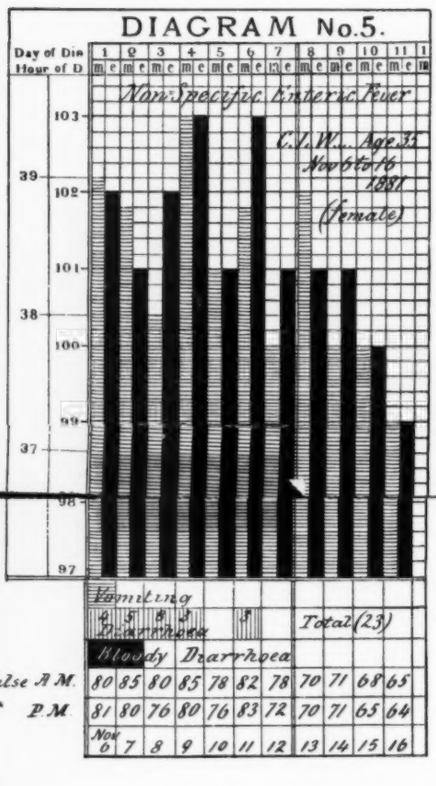


DIAGRAM No.5.
Non-Specific Enteric Fever
C. J. W. Age 35
Nov 6 to 16
1881
(female)
Vomiting
Diarrhoea
Total (23)
Bloody Diarrhoea
Pulse A.M. 80 85 80 85 78 82 78 70 71 68 65
" P.M. 81 80 76 80 76 83 72 70 71 65 64
Nov 6 7 8 9 10 11 12 13 14 15 16

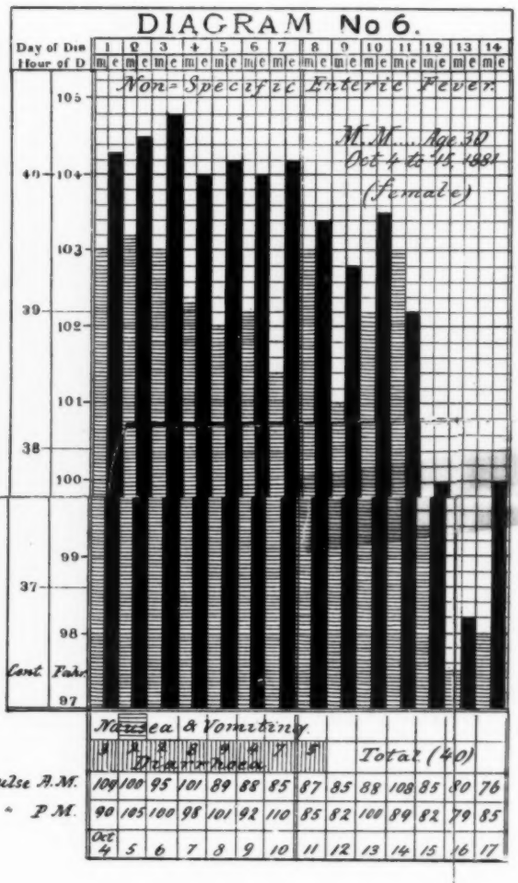
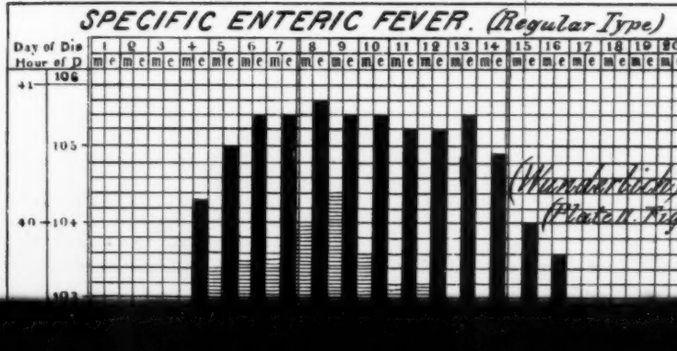
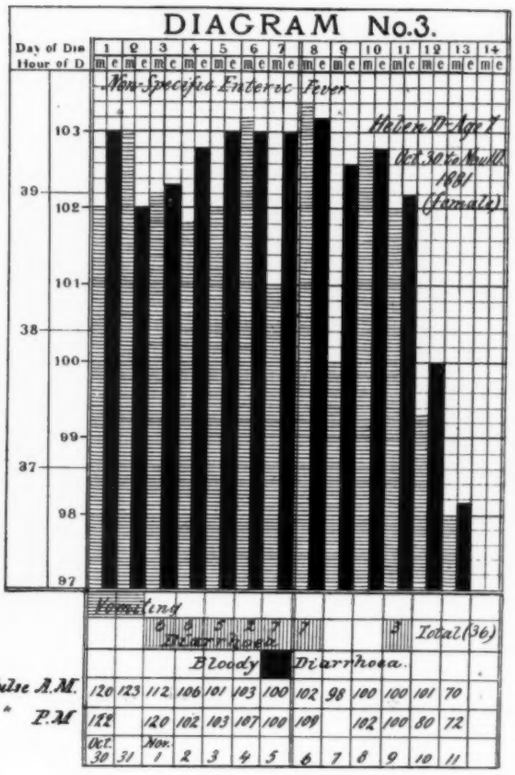


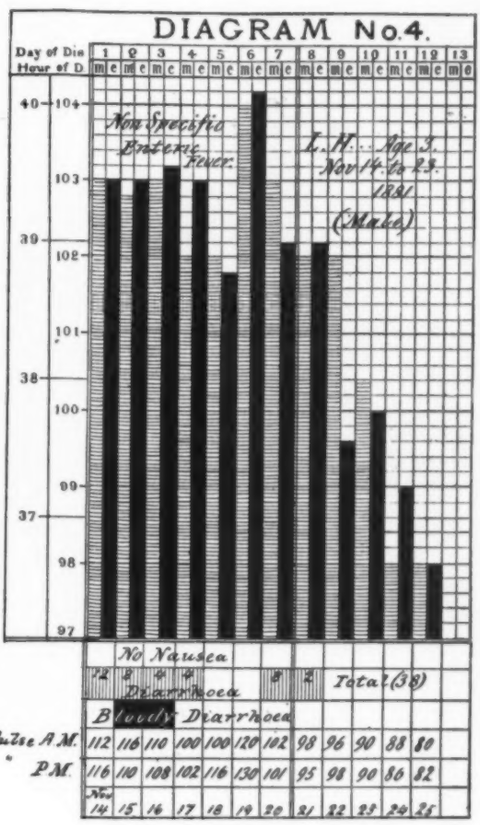
DIAGRAM No 6.
Non-Specific Enteric Fever.
M. M. Age 30
Oct 4 to 17 1881
(female)
Cont. Fahr.
Nausea & Vomiting
Diarrhoea
Total (40)
Pulse A.M. 100 100 95 101 89 88 85 87 85 88 108 85 80 76
" P.M. 90 105 100 98 101 92 110 85 82 100 89 82 79 85
Oct 4 5 6 7 8 9 10 11 12 13 14 15 16 17

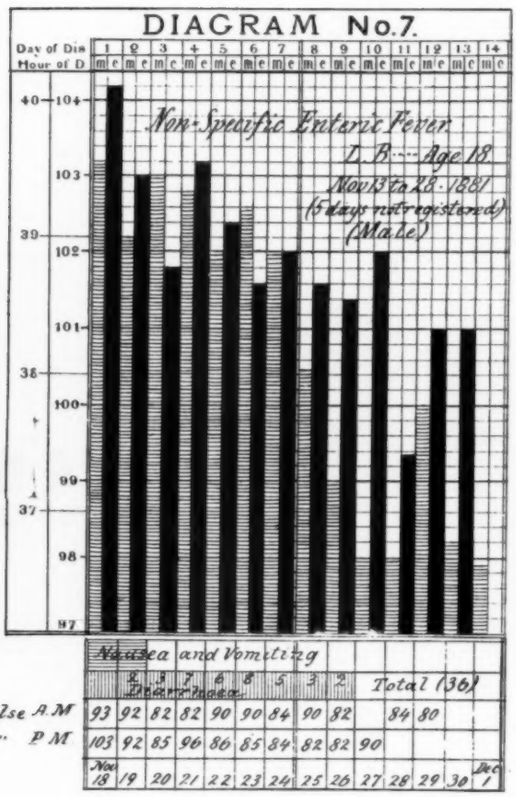

SPECIFIC ENTERIC FEVER. (Regular Type)
(Wunderlich
(Plate II. Fig

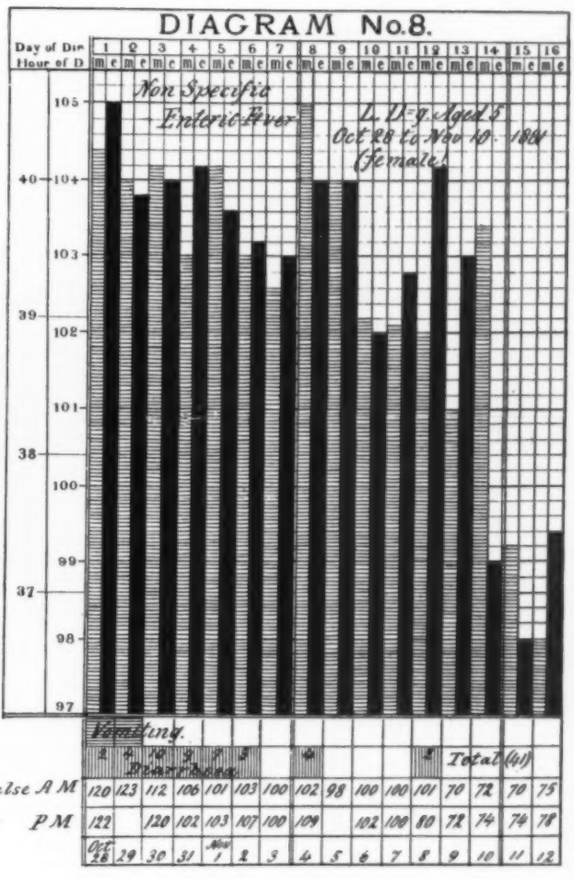
-SPECIFIC ENTERIC FEVER.

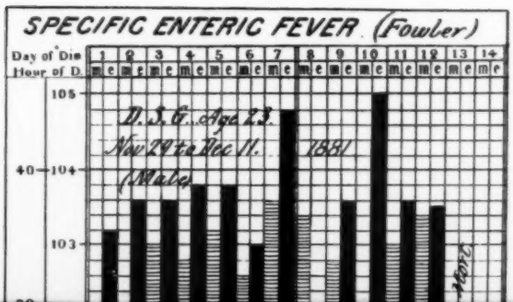
By E. P. FOWLER, M.D., New York.

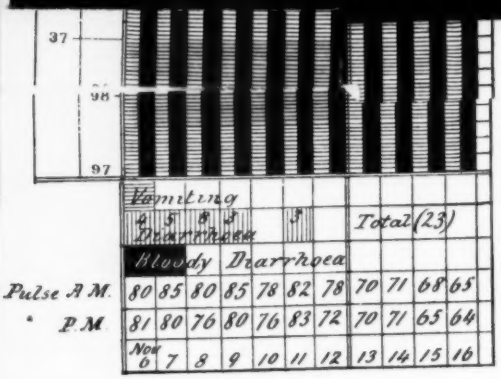


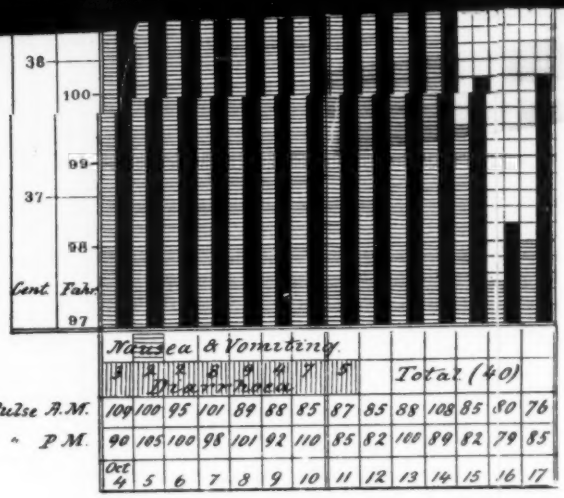


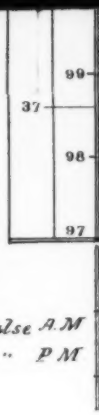


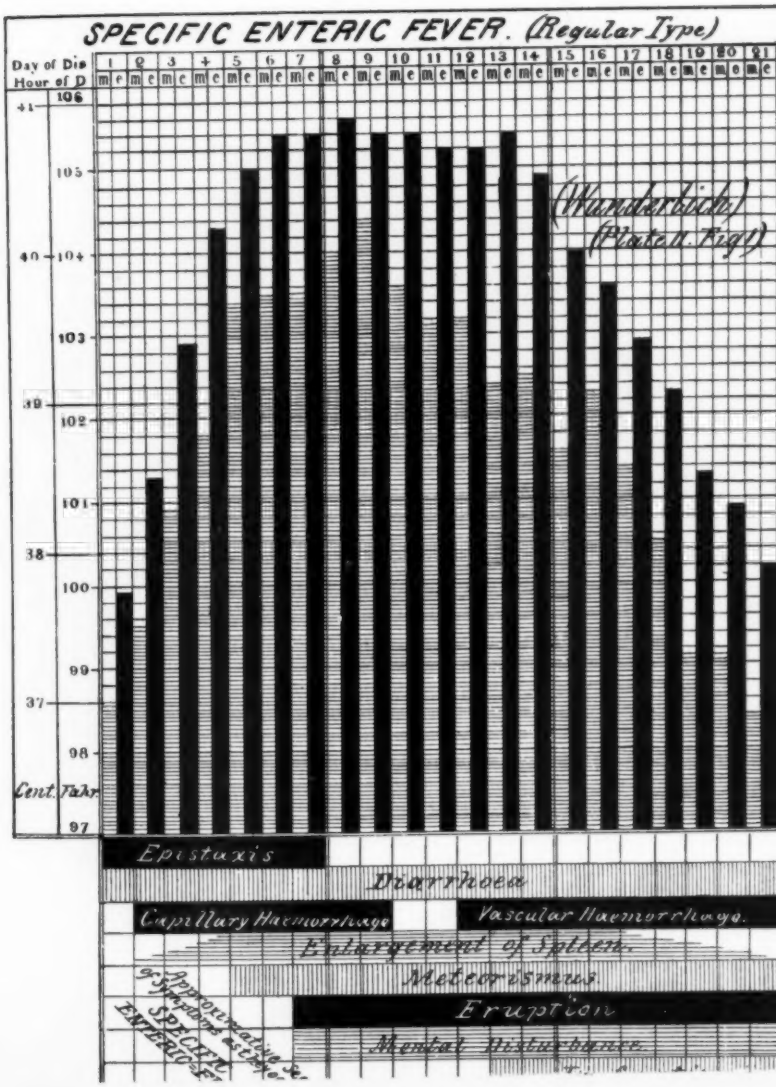




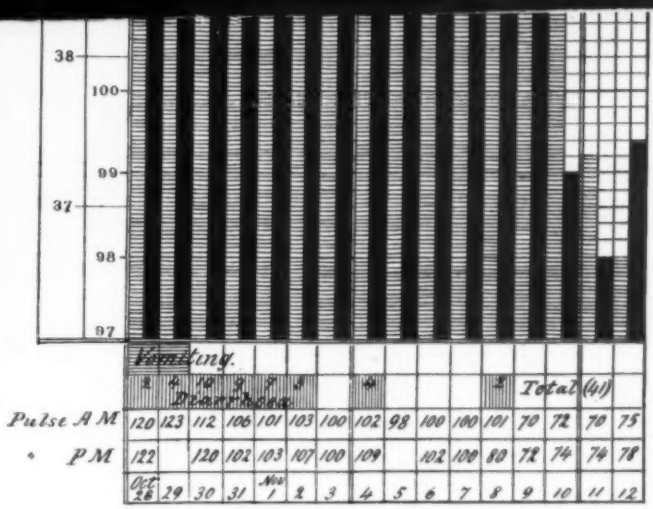

37
98
97
Vomiting
Diarrhoea
Total (23)
Bloody Diarrhoea
Pulse A.M. 80 85 80 85 78 82 78 70 71 68 65
" P.M. 81 80 76 80 76 83 72 70 71 65 64
Nov 6 7 8 9 10 11 12 13 14 15 16

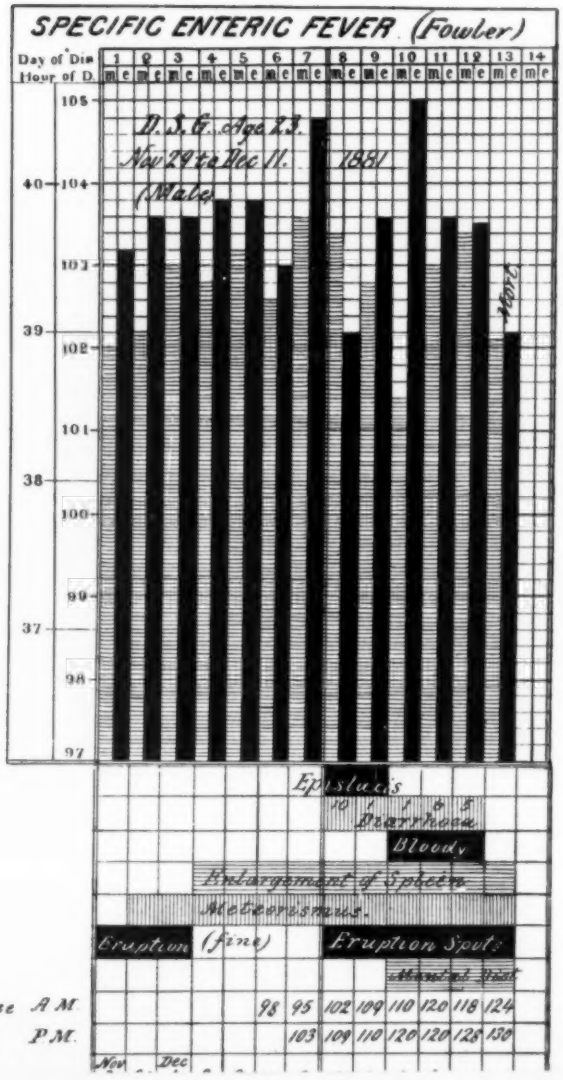

38
100
99
37
98
97
Cent. Fahr.
Nausea & Vomiting
Diarrhoea
Total (40)
Pulse A.M. 109 100 95 101 89 88 85 87 85 88 108 85 80 76
" P.M. 90 105 100 98 101 92 110 85 82 100 89 82 79 85
Oct 4 5 6 7 8 9 10 11 12 13 14 15 16 17

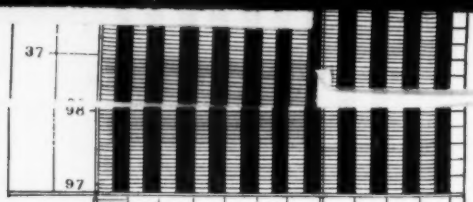

99
37
98
97
Pulse A.M
" P.M


SPECIFIC ENTERIC FEVER. (Regular Type)
Day of Dis
Hour of D
41
40
39
38
37
106
105
104
103
102
101
100
99
98
97
Cent. Fahr.
(Wunderlich) (Plate II. Fig 1)
Epistaxis
Diarrhoea
Capillary Haemorrhage
Vascular Haemorrhage.
Enlargement of Spleen.
Meteorismus.
Eruption
Mental Disturbance.

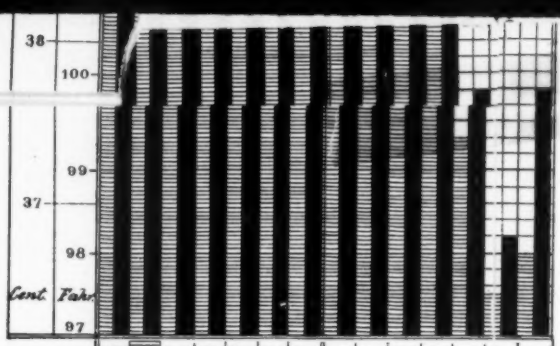
99
98
97
Nausea and Vomiting
Diarrhœa
Total (36)
A M 93 92 82 82 90 90 84 90 82 84 80
P M 103 92 85 96 86 85 84 82 82 90
Nov 18 19 20 21 22 23 24 25 26 27 28 29 30 Dec 1


38
37
100
99
98
97
Vomiting.
Diarrhœa
Total (41)
Pulse A M 120 123 112 106 101 103 100 102 98 100 100 101 70 72 70 75
P M 122 120 102 103 107 100 109 102 100 80 72 74 79 78
Oct 28 29 30 31 Nov 1 2 3 4 5 6 7 8 9 10 11 12

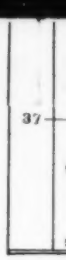

SPECIFIC ENTERIC FEVER (Fowler)
Day of Dis
Hour of D
1 2 3 4 5 6 7 8 9 10 11 12 13 14
m e m e m e m e m e m e m e m e m e m e m e m e m e m e
105
104
103
102
101
100
99
98
97
40
39
38
37
U. S. G. Age 23.
Nov 29 to Dec 11. 1881
(Male.
Epistaxis
Diarrhœa
Bloody
Enlargement of Spleen
Tenderness
Eruption (fine)
Eruption Spots
Mental Gait
Pulse A M 98 95 102 109 110 120 118 124
P M 103 109 110 120 120 128 130
Nov
Dec



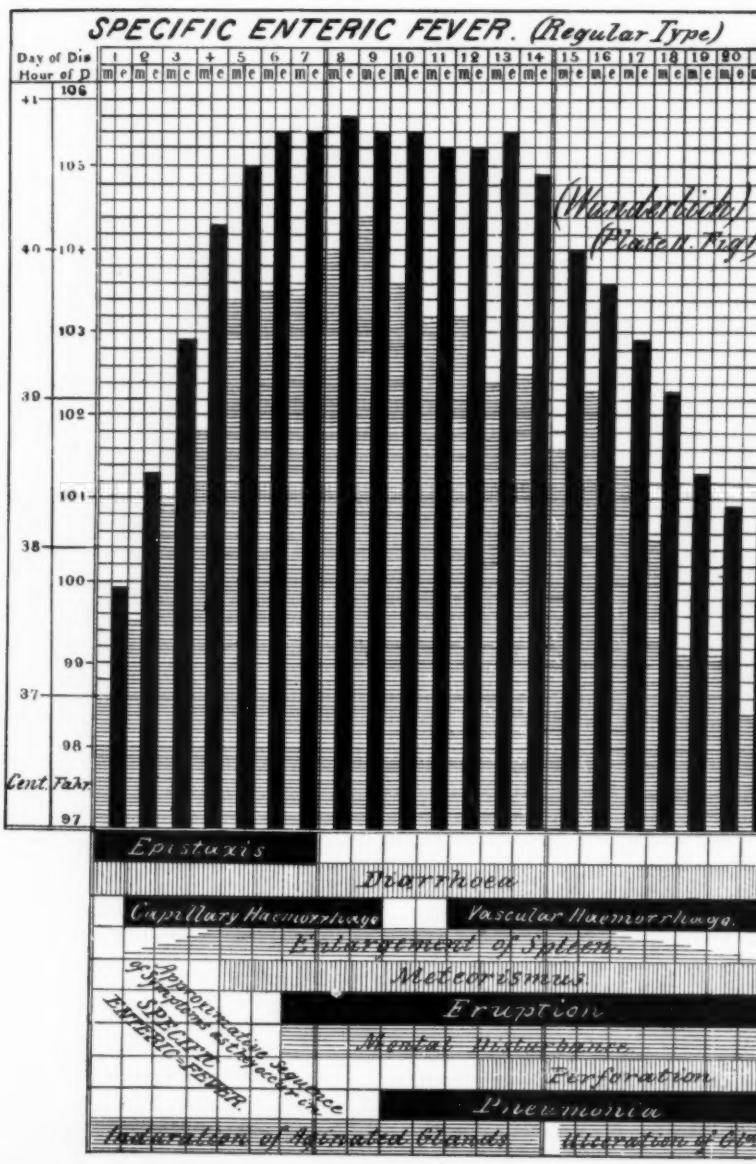
	Vomiting 4 5 6 7 Diarrhoea 8	Total (23)								
	Bloody Diarrhoea									
Pulse A.M.	80	85	80	85	78	82	78	70	71	68	65
" P.M.	81	80	76	80	76	83	72	70	71	65	64
Nov	6	7	8	9	10	11	12	13	14	15	16

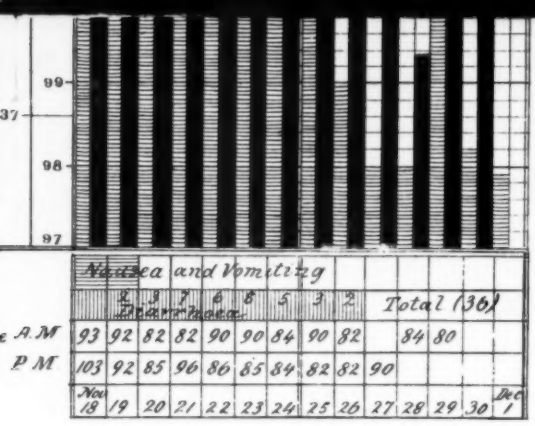


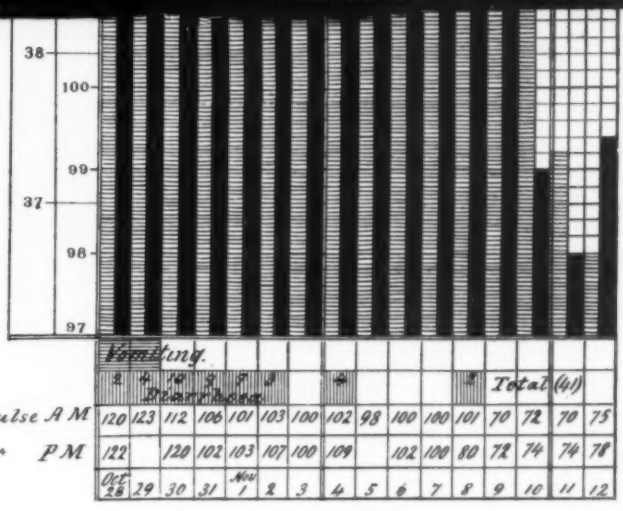
	Nausea & Vomiting 1 2 3 4 5 6 7 Diarrhoea 8 9 10 11 12 13 14 15	Total (40)												
Pulse A.M.	109	100	95	101	89	88	85	87	85	88	108	85	80	76
" P.M.	90	105	100	98	101	92	110	85	82	100	89	82	79	85
Oct	4	5	6	7	8	9	10	11	12	13	14	15	16	17



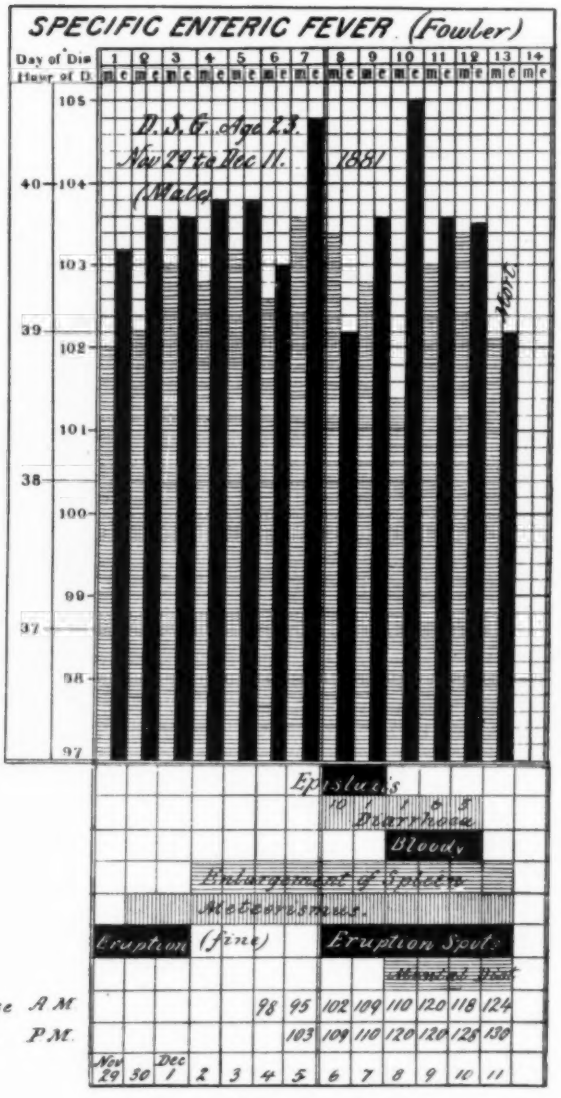
Pulse A.M.
" P.M.




99
98
97
Nausea and Vomiting
Diarrhœa
Total (36)
AM 93 92 82 82 90 90 84 90 82 84 80
PM 103 92 85 96 86 85 84 82 82 90
Nov 18 19 20 21 22 23 24 25 26 27 28 29 30 Dec 1


38
100
99
37
98
97
Vomiting.
Diarrhœa
Total (41)
Pulse AM 120 123 112 106 101 103 100 102 98 100 100 101 70 72 70 75
PM 122 120 102 103 107 100 109 102 100 80 72 74 74 78
Oct 28 29 30 31 Nov 1 2 3 4 5 6 7 8 9 10 11 12

20 21
m e m e


SPECIFIC ENTERIC FEVER (Fowler)
Day of Dis
Hour of D.
1 2 3 4 5 6 7 8 9 10 11 12 13 14
m e m e m e m e m e m e m e m e m e m e m e m e m e m e
105
40
104
103
39
102
101
38
100
99
37
98
97
D. S. G. Age 23.
Nov 29 to Dec 11.
1881
(Male)
Hour
Epistaxis
Diarrhœa
Bloody
Enlargement of Spleen
Albuminuria.
Eruption (fine)
Eruption Spots
Mental Disturbance
Pulse AM 98 95 102 109 110 120 118 124
PM 103 109 110 120 120 128 130
Nov 29 30 Dec 1 2 3 4 5 6 7 8 9 10 11